FY 2002 Performance Plan
Final FY 2001 Performance Plan
FY 2000 Performance Report

April 2001

Centers for Disease Control and Prevention

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Introduction

The Centers for Disease Control and Prevention (CDC) is the lead federal agency responsible for promoting health and quality of life by preventing and controlling disease, injury, and disability. CDC accomplishes its mission by working with partners throughout the nation and the world to monitor health, detect and investigate health problems, conduct research to enhance prevention, develop and advocate sound health policies, implement prevention strategies, promote healthy behaviors, foster safe and healthy environments, and provide public health leadership and training.

A unique and critical aspect of CDC's leadership role is embodied by its National Center for Health Statistics (NCHS). NCHS provides strong leadership in monitoring the health of the American people and is an unparalleled resource for health information. NCHS performs several key roles including providing a solid information base for designing and tracking prevention programs, identifying health problems and risk factors that affect the population, and monitoring the dramatic changes taking place in our nation's health care system. NCHS represents an investment in broad-based, fundamental public health and health policy statistics that meets the needs of a wide range of users within the public health community, the Department of Health and Human Services, other federal agencies, research institutions, and health care practitioners.

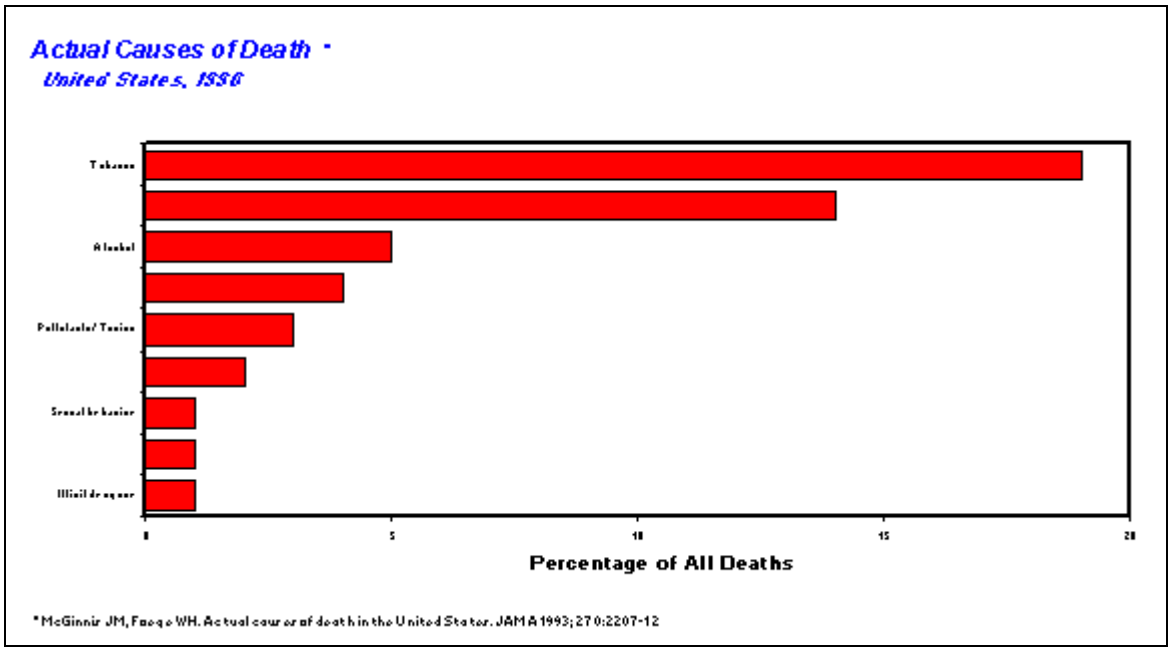
CDC's reliance upon and access to existing data is exemplified by its approach to public health problems. In order to address these problems, CDC uses a reliable, proven, flexible four-step process that adapts to the wide variety of problems that are subjects of CDC programs: infectious diseases, environmental and occupational health, injuries, and chronic diseases. This public health approach consists of detecting and defining a problem through surveillance, determining the causes, developing and testing potential strategies for handling the problem, and implementing nationwide prevention programs. The approach is supported by science, and is reflected in CDC's programs, as well as its evaluation of programs. Prevention effectiveness has been institutionalized as a public health science at CDC. Since 1992, CDC has substantially increased its ability to scientifically assess the prevention effectiveness of its programs and strategies. More than ever, CDC is able to prove that prevention is a sound and solid investment.

CDC's distinguished history of success in disease prevention has spanned 54 years, beginning with the first national disease-elimination strategy used against malaria in 1947. Some well-known accomplishments of the Nation's prevention agency resulting from the more than 3,000 investigations of disease outbreaks include identifying Legionnaires' disease and toxic shock syndrome, Reye's Syndrome, Ebola, hantavirus, and many foodborne and waterborne diseases. CDC's "Disease Detectives" are renowned worldwide for their ability to work with local authorities responding to urgent health threats by aggressively investigating outbreaks of disease or injury, identifying ways to stop transmission, and preventing further occurrence. Each year CDC is instrumental in accurately tracking influenza strains around the globe, and as a World Health Organization Collaborating Center, using sophisticated techniques to provide scientific data essential for vaccine development. As part of a global partnership, CDC played a major role in the worldwide eradication of smallpox in 1977 and, as a partner in massive immunization campaigns, is on the verge of globally eradicating polio. In addition, CDC is making steady progress toward eliminating measles. In this country, vaccine-preventable childhood diseases such as measles, mumps, rubella, pertussis, and diphtheria occur at the lowest rates ever seen. CDC's sentinel surveillance permitted early identification of the AIDS epidemic, thus allowing prevention strategies to be formulated and applied to curtail the frightening growth of this epidemic. Today, CDC works with state, community, national, and international campaigns to prevent and control human immunodeficiency virus infection (HIV), sexually transmitted diseases, and tuberculosis (TB).

CDC is well on its way to correcting the budget mistakes of the past and reemphasizing throughout CDC that we take direction from Congress regarding spending priorities. CDC remains stalwart in our commitment to acknowledge and correct shortfalls, build upon our trust with Congress, prepare for the next emerging disease outbreak, and continue to protect the health and safety of Americans.

As the Nation approaches the 21st century, CDC has embarked on a mission of preventing and controlling the Nation's new leading killers, adapting the epidemiologic and laboratory techniques that have proved successful with infectious diseases, while continuing to battle emerging and re-emerging infectious diseases. Chronic diseases, including heart disease, cancer, and diabetes, now cause more than 70 percent of the deaths in the United States (U.S.), a dramatic shift from the beginning of the 20th century when infectious diseases caused most premature deaths. Early diagnosis saves money as well as lives, and research documents that healthy behavioral choices in diet and physical activity can significantly reduce the incidence of many chronic diseases. For this reason, many of CDC's programs approach prevention by targeting the underlying causes of disease, disability, and injury. These underlying factors have been termed the "actual causes of death" and their toll on the health of Americans is significant.

Figure 1: Actual Causes of Death



For example, CDC's chronic disease prevention strategy is based upon behavioral interventions designed to reduce the underlying causes of chronic diseases. These programs incorporate behavior modification and education to assist the public in efforts to stop smoking, follow a healthier diet, and increase their level of physical activity. Similarly, injury prevention programs rely upon the adoption of prevention practices--the use of seat belts and bicycle helmets, for example. Health promotion and behavior modification are also central to CDC's HIV and sexually transmitted disease programs. Reductions in HIV and sexually transmitted diseases are being achieved through drug education and promotion of safe sex practices, including abstinence. CDC's programs have been strategically grouped into appropriate Centers, Institute, and Offices (CIOs) to more effectively address these factors.

Environmental and occupational health threats also have increased, and CDC's role includes addressing the public health aspects of toxic exposures and occupational diseases, injuries and disabilities. CDC's vision of "Healthy People In a Healthy World Through Prevention" means working with partners to prevent the leading health threats confronting Americans.

Public health and CDC contribute significantly to Americans' ability to lead longer, healthier lives. An infant born today in the United States has 30 more years of life expectancy than in 1900. Twenty-five of these years are directly related to public health efforts. Many public health efforts result in considerable financial savings; others carry a net cost but represent an important investment–and the saving of lives. Clear evidence, for instance, shows that comprehensive health education in schools is effective in reducing risk behaviors among youth, which account for most of the health problems among young people that will follow them into adulthood if not prevented or solved. The signature feature of CDC's public health programs is that they achieve results and cost savings through the promotion of health and quality of life by preventing disease, disability, and injury.

Part I
Agency Context for Performance Measurement

1.1 Agency Vision, Mission and Long-term Goals

In June 1995, CDC launched an agency-wide strategic planning process to refocus the organization's priorities, directions for the future, and assess constituents' requirements. Even though this process was initiated to satisfy the requirements of the Government Performance and Results Act (GPRA), the director of CDC decided to conduct full-scale strategic and performance planning to ensure that CDC continues to be a leader in public health policy and practice.

The agency used its document published in 1994, "Strategic Thinking at the Centers for Disease Control and Prevention," as a foundation for continuing strategic planning at CDC, and to move the agency forward into the 21st century.

During FYs 1999 and 2000, CDC has participated in a strategic planning process led by the Department of Health and Human Services (DHHS). This strategic planning process involved all Operating Divisions within the Department. This plan was completed October 2000, and will replace the current strategic plan that CDC has been operating under since FY 1997. The Department's strategic plan has six broad goals that are supported by multiple objectives. DHHS Goals 1, 4, 5, and 6 relate to CDC programs. Two new objectives were included in the DHHS strategic plan that highlight major program areas for CDC and other Operating Divisions in the Department. These new objectives are: Reduce the incidence and impact of injuries and violence in American society, and Reduce the impact of infectious diseases.

This annual performance plan builds upon these strategic planning efforts, specifying in greater detail the strategies, goals, objectives and results of CDC's public health programs.

2000 DHHS Strategic Goals and Objectives Related to CDC Programs

Goal 1: Reduce the major threats to the health and productivity of all Americans.

Objective 1.1 Reduce tobacco use, especially among youth.
Objective 1.2 Reduce the incidence and impact of injuries and violence in American society.
Objective 1.3 Improve the diet and level of physical activity of Americans.
Objective 1.4 Reduce alcohol abuse and prevent underage drinking.
Objective 1.5 Reduce the abuse and illicit use of drugs.
Objective 1.6 Reduce unsafe sexual behaviors.
Objective 1.7 Reduce the incidence and impact of infectious diseases.
Objective 1.8 Reduce the impact of environmental factors on human health.

Goal 4: Improve the quality of health care and human services.

Objective 4.1 Enhance the appropriate use of effective health services.
Objective 4.2 Increase consumer and patient use of health care quality information.
Objective 4.3 Improve consumer and patient protection.
Objective 4.4 Develop knowledge that improves the quality and effectiveness of human services practice.

Goal 5: Improve the nation's public health systems.

Objective 5.1 Improve the capacity of the public health system to identify and respond to threats to the health of the nation's population.
Objective 5.2 Improve the safety of food, drugs, medical devices, and biological products.

Goal 6: Strengthen the nation's health science research enterprise and enhance its productivity.

Objective 6.1 Advance the scientific understanding of normal and abnormal biological functions and behaviors.
Objective 6.2 Improve our understanding of how to prevent, diagnose, and treat disease and disability.
Objective 6.3 Enhance our understanding of how to improve the quality, effectiveness, utilization, financing, and cost-effectiveness of health services.
Objective 6.4 Accelerate private-sector development of new drugs, biologic therapies, and medical technology.
Objective 6.5 Strengthen and diversify the base of well-qualified health researchers.
Objective 6.6 Improve the communication and application of health research results.
Objective 6.7 Strengthen mechanisms for ensuring the protection of human subjects in research and the integrity of the research process.

Vision: "Healthy People in a Healthy World–Through Prevention"

The CDC vision conveys an idea of what the world would be if CDC's health promotion and disease prevention goals were fully achieved. The agency is committed to helping create a safe physical and social environment where health is both protected and promoted nationally and internationally. CDC believes that prevention is the foundation for achieving this vision.

Mission: To promote health and quality of life by preventing and controlling disease, injury, and disability.

CDC's mission statement succinctly states how the agency approaches its responsibilities as the nation's prevention agency. Accomplishing this mission is predicated on CDC's ability to build on the following agency strengths:

- Prevention strategies based on sound scientific knowledge.
- Leadership and technologic capabilities of state and local health organizations and the integration of those capabilities with private health organizations.
- Trained public health workers and leaders.
- Ability to serve a diverse population with a diverse work force.

Strategic Agency Goals

During a one-year period that began in mid-1995, the CIOs of CDC engaged in a planning process that involved their stakeholders and employees in identifying strategic issues for CDC. The agency-wide goals were intended to be broad and all-encompassing. Because CDC's opportunities and responsibilities are often determined by societal changes and environmental events, as opposed to planned internal actions, the goals had to project a broad, overarching approach that relates the agency's programs to the public health community and to the public in general. Under each goal statement, strategies were articulated to elaborate the goal statement as well as describe ways to achieve goals.

The CDC Strategic Framework was developed in the following way: Actions needed to achieve the agency goals were drafted by the CIOs in the form of strategic (five-year) and annual goals. Annual goals represented the first year of achievement of the five-year goal. Performance measures were also developed by the CIOs for both strategic and annual goals. Specific, measurable objectives were developed to support CIO strategic and annual goals.

Healthy People 2000/*2010* goals and objectives serve as a foundation for a number of CDC's performance measures. However, it should be noted that although CDC has lead responsibility for many of the objectives contained in *Healthy People 2000/2010*, achievement of the goals represents a national effort in which CDC partners with other federal, state, local, and community public health entities participate. Therefore, performance measures within CDC's plan have been crafted to reflect the collaborative nature of CDC's program activities.

Concurrent with its efforts to meeting Healthy People 2000 and 2010 Objectives, CDC also is focusing on strengthening the nation's public health infrastructure by developing a program for public health jurisdictions that will assess and monitor organizational performance and provide ongoing information to public health infrastructure by developing a program for public health jurisdictions that will assess and monitor organizational performance and provide ongoing information to public health leaders, policy makers, program managers, and others to assist in overall preparedness, identifying needs and targeting resources. This infrastructure development program, the National Public Health Performance Standards Program, has as its goals: (1) to provide CDC and its collaborators with data to assist in monitoring and

measuring performance of local public health systems; (2) to assess the public health infrastructure, including data and information systems, public health workforce, and effective public health organizations that enable the performance of the essential public health services in every community; and (3) to evaluate the use of these data in developing strategies to strengthen the infrastructure of public health. CDC is partnering with the National Association of County and City Health Officials (NAACHO), the Association of State and Territorial Health Officials (ASTHO), the National Association of Local Boards of Health (NALBOH), American Public Health Association (APHA), and the Public Health Foundation (PHF) to carry out this program. Model standards and measurement instruments have been developed. Approval to use the assessment instruments is expected from OMB in the fall fo 2001. National use of the instruments will follow. The data obtained will allow CDC, in partnership with the public health community, to improve the public health system's quality, capacity, and performance. Crosscutting infrastructure issues that will be identified by these data include the role of organizational and professional capacities in improving health outcomes in States and local communities, the extent of readiness for emergency preparedness, and the need for effective state and local leadership.

Below are the four strategic goals that capture the direction for CDC over the next five years. Each goal statement is followed by a brief presentation that associates the CDC goals and strategies with CDC's budget program activities. Resources required to achieve these activities have been submitted as part of CDC's budget submission.

Goal 1 Science: Assure a strong science base for public health action.

The applied techniques of epidemiology, laboratory, behavioral, and social sciences are the primary tools that CDC uses to understand the causes of poor health, identify populations at risk, and develop interventions for disease control and prevention. As research provides more information about the relationships between the physical, mental, and social dimensions of well-being, a broader approach to public health has become important in the quest for answers to prevent and solve health problems. CDC is committed to expanding its research agenda to help bridge the gap between research and public health practice. Through the integration and communication of scientific information, the most effective public health solutions will be translated into practice in the Nation's communities. Sound public health policy decisions are based on excellence in science and provide the means to achieve the best results.

Program Activities and Strategies for accomplishing Goal 1

CDC's strategy for assuring a strong science base for public health action requires an agency commitment to support and conduct high quality epidemiologic, laboratory, behavior, and social science research. Through its programs in Environmental Health, Infectious Diseases, Occupational Safety and Health, Epidemic Services, and the Prevention Centers, CDC advances the science base in public health by conducting and supporting both extramural and intramural research on a wide range of public health issues. For FY 2002, research on several major public health issues will be conducted in order to improve decision making, to examine health outcomes, or to prevent disease. To ensure the scientific foundation of public health practices, CDC is continuing to coordinate the development of the Guide to Community Preventive Services. This Guide will provide public health practitioners, their community partners, and policy makers with evidence-based recommendations for planning and implementing population-based services and policies at the community and state level.

Goal 2 *Assessment*: Detect and assess threats to public health.

The wisdom and legitimacy of public health decisions are crucially affected by the quality of the information on which they are based. A unique role of CDC is to provide comprehensive information on health including health status, health risks, the health care system, and health-related outcomes. By maintaining a broad-based monitoring capability, CDC can quickly detect and assess public health threats. CDC's assessment capability, epidemiologic and laboratory surveillance, and response capacity ensure a system that identifies health problems and deploys teams of experts to help resolve the problems promptly. Additionally, the assessment and surveillance capacity ensures data for analysis that can help identify causes of disease early and assist in decisions about appropriate research, policy, and programmatic actions.

Program Activities and Strategies for accomplishing Goal 2

To accomplish this goal, emphasis will be on assuring that CDC's surveillance and health information systems address current health issues and problems and that existing and new CDC data systems are carefully coordinated and integrated. CDC's Health Information and Surveillance Systems Board stimulates and sponsors innovation in health information and surveillance systems supportive of the essential public health services. In addition, epidemiologic and laboratory capacity for surveillance and response will be strengthened. Making health information available to a wide audience is a major CDC priority that requires adjustments to existing data and surveillance systems and modifications of the procedures for accessing information. For FY 2002, this goal is accomplished through many of CDC's program activities, with emphasis on Health Statistics, the Preventive Health and Health Services Block Grant, Epidemic Services, and Cancer Registries.

Goal 3 *Policy*: Provide leadership for the nation in prevention policy and practice.

As the emphasis in responsibility for public health services moves from the federal level of government to local governments, CDC will continue in a crucial public health role. CDC's leadership in prevention policy can and should help focus scientific and professional expertise in setting national public health policy. CDC also encourages actions on the part of other federal, state, and local agencies, tribal nations and private organizations to aid in the reduction of threats to health and the promotion of good health. Public health leadership includes the provision of funds and technical assistance, the development of national health data, the conduct of research, and the development of policies and practices that are shaped by science. Through these mechanisms, CDC assures that the public's interest is best served by the measures and programs that are adopted. CDC's role in policy development includes communicating with all affected parties, considering the long-term effects of policy decisions, and speaking for persons or groups who have difficulty being heard.

Program Activities and Strategies for accomplishing Goal 3

The strategy to address this goal requires CDC to commit to systematic planning and evaluation of its programs and products and when feasible to document the costs and benefits of prevention programs. The establishment of a mechanism for continuous review and feedback on the science produced in and through CDC-funded projects is an important means for improving the overall effectiveness of the agency. The processes of planning, evaluating, peer reviewing, and providing feedback assure that the research standards and policy guidelines developed by CDC provide current and reliable information for use in health promotion and disease prevention programs. To augment this process, CDC has developed a framework for evaluation in public health practice, an activity designed to encourage combining the science of evaluation with the demands of program management.

Goal 4 *Assurance*: Assure the public's health through the translation of research into effective community-based action.

This goal is oriented toward developing the capacity of public health departments to carry out essential public health programs and services, and involve community institutions and community groups in health promotion and disease prevention. As CDC strengthens its ongoing relationships with state and local health agencies, it is also committed to building partnerships with non-governmental organizations at the community and national levels. These partnerships are essential for the design, implementation, and evaluation of sound prevention programs. What people understand about their health and potential risks to their health is of major concern in public health. CDC is committed to promoting effective health communication, conveying information to appropriate populations, and facilitating access to health information. The agency seeks to enhance the public's health knowledge through communication that is congruent with the values of diverse communities.

Program Activities and Strategies for accomplishing Goal 4

To accomplish this goal, a major emphasis must be placed on expanding CDC's partners to reflect the diversity of the nation. The role and influence of the community are vital when designing, implementing, and evaluating public health intervention strategies. There are many areas where CDC is building the capacity of its partners to carry out important public health programs. Through state and local health departments, prevention and control programs focus on the reduction of sexually transmitted diseases, HIV/AIDS, tuberculosis, vaccine preventable diseases, breast and cervical cancer, diabetes, injuries, and childhood lead poisoning. In FY 2002, CDC will continue its efforts in the training of public health leaders in the science of public health practice. Training efforts in this area are critical in addressing future public health issues. For example, the CDC-sponsored Public Health Leadership Institute is an ongoing program that develops the leadership skills of public health officials at the Federal, State, and local levels.

1.2 Organization, Programs, Operations, Strategies and Resources

The CDC is known as the "Nation's Prevention Agency." Since the agency was founded in 1946, it has been at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats. Finding workable approaches to these complex health problems presents multidimensional challenges for our nation's public health network, and requires a broad array of skills, abilities and experience. CDC has constantly evolved and innovated to effectively address new health challenges. From the traditional public health practice of infectious disease control, CDC has broadened its mission to address the role of complex social and behavioral risk factors for disease, injury, and disability.

To effectively carry out its mission, CDC is currently organized into 11 major program components and nine staff offices. One of CDC's greatest resources is it's more than 7,400 employees, who provide quality service to the American people and who provide expertise in public health surveillance, epidemiology, statistical analysis, laboratory investigation and analysis, health communications and social marketing, behavioral risk reduction, technology transfer, and prevention research. CDC's presence is global, with employees assigned to posts in 20 countries, and 46 of the 50 states. CDC headquarters is located in Atlanta, Georgia, with 15 field stations located throughout the nation and in Puerto Rico.

Levels of preventable illness, disability, and death in the United States are still unacceptably high, creating gaps in areas where people haven't benefitted from progress made during the last century. For instance, gains in life expectancy have not benefitted all Americans equally; the gap in life expectancy between African Americans and whites has been increasing since the 1970's. To prepare CDC to meet

these and other challenges of the new millennium, CDC has committed to the following priorities that reflect our commitment to excellence and social justice, creativity, and compassion:

Strengthen Science for Public Health Action: CDC is only as strong as its science. But science is only the first step and not an end unto itself. We must use our science to make real, measurable differences in people's lives. To do that, we must have a strong, flexible, and supportive public health infrastructure. This infrastructure should promote strong science, including laboratory, epidemiologic, social, and behavioral sciences, and biomedical prevention and health systems research to direct public health action. It should develop and maintain a skilled and highly effective workforce, able to put that science to best use. And it should build integrated information and surveillance systems that improve our ability to monitor the effectiveness of our use of science to improve the public's health.

Enhancing Environmental/Occupational Health: Significant premature death and avoidable illness and disability result from interactions between people's unique biologic, social, and lifestyle factors and their environment. The environmental role in the development of diseases, injuries, and disabilities is well recognized, but in many instances not well understood. The task of learning more about environmental exposures and health risks is complex, involving the use of surveillance systems, data, and biomonitoring methods to detect and assess environmental and occupational health threats. Increased efforts are needed to reduce the impact of environmental factors on human health through research, surveillance, and public health prevention programs.

Promote Healthy Living at Every Stage of Life: Americans are living longer, bringing about a demographic transition as we become a nation with more older adults. Because of this transition, we face new challenges in promoting health at every stage of life. In recent years, we have accomplished much in improving the health of children. The same intensity of effort used to improve our children's health now must be extended to all age groups, and we must guarantee that at every stage of life people are empowered with the knowledge necessary to help them in improving their own health.

Promoting Global Health: Disparities in health status have widened between developed and developing nations. In addition, transportation and population shifts make it possible for new and emerging diseases to travel swiftly across continents and around the world. Facing these challenges requires even closer cooperation with our global partners in using science and sound policy to promote public health globally.

Reducing Disparities: Strong evidence suggests that there is persistent disparity in the health status of people of color as compared with the overall health status of the American people, and that race and ethnicity correlate with the continued and increasing health disparities in members of these communities. Often the underlying causes of increased levels of disease and disability among these groups include poverty, lack of adequate access to quality health services, failure to receive preventive or "state-of-the-art" health care, and the need for effective prevention programs tailored to specific community needs. Reducing racial and ethnic disparities in health will require research to identify new knowledge about causes of health disparities and effective means of delivering preventive and clinical services. It will also require new and innovative ways of working in partnership with state, local, and tribal governments and communities.

1.3 Partnerships and Coordination

The concept of partnerships and coordination toward the completion of established goals and objectives is not new among the public health organizations. The July 1979 publication, *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention,* described for the first time a national public health agenda. This report established five quantifiable goals for improving health status, risk reduction, public and professional awareness of prevention, health services and protective measures, and surveillance and evaluation by the year 1990. Success in meeting these objectives has been documented in areas such as hypertension, childhood infectious diseases, and injury prevention. Several objectives were not met by 1990. The Public Health Service's commitment to developing Year 2000 and 2010 Objectives affirms the commitment to addressing public health problems that persist, as well as problems that have appeared or intensified since the inception of the national health objectives.

To ensure broad-based input, more than 300 national organizations and 7,000 individuals and organizations participated in the development of the year 2000 objectives. Key participants included representatives of state and local health departments. The extensive participation by representatives of state and local governments, academic institutions, business and labor, and community and professional organizations at each step in the process helped to establish the broad network needed for successful implementation of programs. CDC actively participated in this process, accepting the lead in overseeing the coordination, collaboration and implementation of several health promotion and disease, injury and disability prevention objectives. Many of the performance objectives in the CDC Annual Performance Plan are directly linked to the Healthy People Objectives.

Just as the development of the national health objectives is dependent on the work of many, CDC works with its many partners throughout the United States and the world to accomplish the long-term and annual goals in the CDC Performance Plan and the DHHS Strategic Plan. State and local health departments provide the infrastructure on which the public's health is built. Other traditional partners include individuals and institutions that educate and promote the health of Americans of all ages, such as school systems, local community groups, businesses, and voluntary and professional associations and other federal organizations. In view of the increasingly diverse and complex role of public health, CDC has reached out to newer and less traditional public health partners, including churches, local organizations, health insurance organizations, health alliances, health boards, consumer groups, and private medical providers.

The Agency for Toxic Substances and Disease Registry (ATSDR) provides a unique partnership opportunity for CDC. In 1983, the Secretary of the Department of Health and Human Services (DHHS) established, by Administrative Order, ATSDR as an agency within the Public Health Service located at the CDC headquarters in Atlanta, Georgia. ATSDR was created to address the health related sections of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or what is more commonly known as "Superfund" legislation. In June 1985, ATSDR was formally organized as an independent agency. By implementing the programs that support its mission, ATSDR forms a critical link among environmental public health, research, and regulatory organizations.

ATSDR, in concert with CDC, the Environmental Protection Agency (EPA), and the National Institute of Environmental Health Sciences (NIEHS), supports CERCLA, one of the most challenging and innovative environmental laws relating to public health. The coordination and collaboration among these environmental public health organizations strengthen the Nation's capacity to understand and respond to environmental public health concerns. Because ATSDR carries out a unique mission, separate and distinct from CDC's, a performance plan specific to ATSDR's programs and activities has been created and submitted as a distinct plan that is incorporated in the CDC and DHHS planning and reporting documents.

1.4 Accountability Through Performance Measurement

Several activities have been undertaken at CDC to ensure the effective use of performance-based management. Upon becoming Director of CDC in December 1998, Dr. Jeffrey Koplan immediately established health priorities and operating principles to ensure the use of performance-based management in directing the work of CDC.

The health priorities identify what we must do to prevent unnecessary injury, disease, disability, and death in the United States and around the globe. The priorities are as follows:

- Reduce Health Disparities.
- Promote Healthy Living at Every Stage of Life.
- Work with Partners to Improve Global Health.
- Strengthen Science for Public Health Action.
- Enhance Environmental and Occupational Health.

The operating principles support achievement of the priorities by specifying how day-to-day operations at CDC must function. The operating principles involve:

using *science* as a basis for decision-making and public health action.
expanding the quest for *social equity* through public health action.
ensuring that our efforts are *outcome oriented*.
being *accountable*.
performing enthusiastically and effectively as a *service* organization.

These health priorities and operating principles are clearly consistent with the intent of the Government Performance and Results Act, and emphasize ongoing, objective measurement of performance, accountability, and outcomes.

Changes are occurring in CDC's business practices, such as:

An emphasis on accountability in program reviews, as evidenced by the Director's request that participation be limited to upper management, thereby allowing for questions focused on program performance.
Improved fiscal forecasting, supported by financial systems that allow for more accurate budget projections.
Requirements for new initiatives to include performance measures and evaluation strategies.

Development and refinement of performance indicators has had a positive effect on many programs throughout CDC. As part of the developmental process, CDC programs worked closely with partners to identify measures that would be meaningful to all working in a particular program area. These collaborations resulted in clearer expectations about program intent, outcomes, and management challenges. Similarly, as new initiatives are developed, goals and measures to support them are created and incorporated into CDC's Performance Plan. In order to achieve this end, a crosscutting approach has been followed. Budgetary, operational, policy, and technical staff are all involved in the development of a program's measures. This approach is very helpful in generating a shared vision for a program's intent as well as its operation. This model will allow CDC effective, early evaluation of program operations.

Relationship between the Performance Plan and the Budget Display

In recent weeks, CDC has proposed a revised budget structure. Categories describing major budget activities have changed slightly. CDC's Justifications of Budget Estimates is being submitted following this revised format. CDC's Annual Performance Plan and Report, which has traditionally mirrored its budget structure, deviates from the revised budget structure in a few instances. The next submission of CDC's Annual Performance Plan and Report will follow the revised budget categories, but due to the short period of time between final acceptance of the revised budget structure and submission of the plan, changes were not possible for this submission. In all instances, program descriptions, performance goals and performance measures are provided for major budget categories. There is some minor deviation in terms used for the sub-budget activities. Nevertheless, budget data are provided for all major budget categories, and these budget data are linked to performance data. The minor discrepancies in descriptions of sub-budget activities will be rectified in the submission of the FY 2003 Annual Performance Plan.

The table below provides a "crosswalk" between the reporting categories contained in the Annual Performance Plan and Report and the revised budget activities.

Performance Plan Categories and Sub-Budget Activities	Placement under Revised Budget Categories and Sub-Budget Activities
Infectious Diseases	**Infectious Disease Control**
Emerging Infections	Unchanged
National Electronic Disease Surveillance System (NEDSS)	Moved to **Epidemic Services and Response**
Tuberculosis	Moved to **HIV/AIDS, STD and TB Prevention**, Tuberculosis Prevention & Control
HIV/AIDS	Moved to **HIV/AIDS, STD and TB Prevention**, HIV/AIDS
Sexually Transmitted Diseases	Moved to **HIV/AIDS, STD and TB Prevention**, Sexually Transmitted Diseases Prevention & Control
Immunization	**Immunization**
Immunization	Unchanged
Health Statistics	**Health Statistics**
Health Statistics	Unchanged
Chronic & Environmental Diseases	**Chronic Disease Prevention & Health Promotion**
Cardiovascular Disease	Renamed to **Chronic Disease Prevention & Health Promotion**, Heart Disease & Stroke

Performance Plan Categories and Sub-Budget Activities	Placement under Revised Budget Categories and Sub-Budget Activities
Cancer Registries Control	Renamed to **Chronic Disease Prevention & Health Promotion**, Cancer Prevention &
Diabetes Other	Renamed to **Chronic Disease Prevention & Health Promotion**, Diabetes, Arthritis & Chronic Diseases
Performance Plan Categories and Sub-Budget Activities	Placement under Revised Budget Categories and Sub-Budget Activities
Arthritis Other	Renamed to **Chronic Disease Prevention & Health Promotion**, Diabetes, Arthritis & Chronic Diseases
Risk Factors: Tobacco Use, Poor Diet, Physical Inactivity	Renamed to **Chronic Disease Prevention & Health Promotion**, Tobacco
Health Promotion	Renamed to **Chronic Disease Prevention & Health Promotion**, Health Promotion
Behavioral Risk Factor Surveillance System	Renamed to **Chronic Disease Prevention & Health Promotion**, Health Promotion (?)
Environmental Health Laboratory Sciences (Biomonitoring)	Moved to **Environmental Health**, Environmental Health Laboratory
Birth Defects Prevention	Moved to **Birth Defects/Disability and Health Development**, Birth Defects
Asthma	Moved to **Environmental Health**, Asthma
Disability & Health	Moved to **Birth Defects/Disability and Health** Development, Disability and Health
Lead Poisoning	Moved to **Environmental Health**, Childhood Lead Poisoning
Genetics & Disease Prevention	Moved to **Environmental Health**, Genetics & Disease Prevention
Core Capacity in Environmental Health	Moved to **Environmental Health**, Environmental Health Activities
Breast & Cervical Cancer Prevention	Renamed to **Chronic Disease Prevention & Health Promotion**, Cancer Prevention & Control
Prevention Centers	Renamed to **Chronic Disease Prevention & Health Promotion**, Prevention Centers
Prevention Research	Moved to **Public Health Improvement**

Performance Plan Categories and Sub-Budget Activities	Placement under Revised Budget Categories and Sub-Budget Activities
Preventive Health & Health Services Block Grant	**Preventive Health & Health Services Block Grant**
Performance Plan Categories and Sub-Budget Activities	Placement under Revised Budget Categories and Sub-Budget Activities
Injury Prevention & Control	**Injury Prevention & Control**
Youth Violence Prevention	Unchanged
Violence Against Women	Unchanged
Bicycle Helmet & Head Injury Prevention	Unchanged
Fire-Related Injury Prevention	Unchanged
Injury Prevention & Control Research	Unchanged
Data Access	Unchanged
Electronic Emergency Department Public Health Reporting	Unchanged
Epidemic Services	**Epidemic Services & Response**
Epidemic Services	Renamed **Epidemic Services & Response**
Public Health Workforce Development	Renamed **Epidemic Services & Response**
Occupational Safety & Health	**Occupational Safety & Health**
Buildings & Facilities	**Buildings & Facilities**
Bioterrorism	**Bioterrorism**
Eliminating Ethnic & Racial Disparities	**Public Health Innovation**
Eliminating Ethnic & Racial Disparities	Renamed **Public Health Innovation**
Office of the Director	**Office of the Director**
Program Support Goals	**N/A***

* Program Support Goals do not correlate to any particular budget authority, but represent over-arching business practices employed across all CDC programs.

Performance Summary

CDC's FY 1999 strong performance continued as additional data from FY 1999 activities became available following the publication of the FY 1999 Performance Report in January 2000. New data from FY 1999 include the following programs:

NCID: The FY 1999 target of 0.9 infections per year the incidence of perinatal Group B streptococcal infections was exceeded. In FY 1999, 0.4 perinatal Group B streptococcal infections were reported per 1,000 live births.

Tuberculosis: The trend continues to increase in the percentage of TB patients that complete a course of curative TB treatment as well as the percentage of TB patients with initial positive cultures who also have drug susceptibility results.

Sexually Transmitted Diseases: The prevalence of *Chlamydia trachomatis* among high risk women under 25 is slowly being reduced, whereas the prevalence reduction among women under 25 in publically-funded family planning clinics has exceed expectations. CDC targets for the incidence for PID, congenital and primary and secondary syphilis have also been exceeded.

Immunizations: The trend in the number of cases of vaccine preventable diseases in children under 5 years of age continues to decrease for Rubella and *Haemophilus influenzae*, and remain at or near zero for polio, measles, Diphtheria, rubella and tetanus. Significant reductions in the cases of mumps have occurred, exceeding FY 1999 targets. The trend in the number of Pertussis cases among children under 7 years of age continued to decrease from the FY 1998 report. The immunization coverage among children 19 to 35 months of age continues to be high. Immunization rates for persons 65 and older have increased since FY 1998. Domestic and international efforts in the global eradication of polio continue to meet or exceed targets in the purchase of vaccines, expansion of technical and scientific networks in public health, and expansion in the number of trained professionals assigned to WHO. The targets associated with number of vaccine-associated adverse events were met or exceeded.

Results for FY 2000 indicate that CDC programs are progressing well. To date, data has been obtained for 75% of CDC's FY 2000 performance measures. Data for the majority of the remaining performance measures will be obtained by November 2001. Highlights from these data will be reported below by major budget categories.

Birth Defects/Developmental Disabilities/Disabilities and Health: CDC's focus for its Disabilities and Health Program has been to expand the number of states that participate in a disability module of a national survey. Through the combined efforts of CDC and its state partners, the FY 2000 target of 14 states participating in a disability module has been exceeded by two.

The FY 2000 target of 35 states participating in the National Birth Defects Prevention Network was not met. During this year only 26 states were able to meet the more stringent data requirements to be included in the annual report. Although the report contains data from 26 states, the data will be of higher quality.

Research has indicated that ingestion of at least 400 micrograms of folic acid daily by women of childbearing age will reduce the prevalence of spina bifida and anencephly. CDC and its partners have developed an award-winning public service announcement that delivers educational messages encouraging women to consume more folic acid. This educational campaign is based on voluntary participation by over 30 national organizations. To date this limited campaign has resulted in modest gains in CDC's performance target of 40% of women of childbearing age consuming folic acid. Data for FY 2000 indicate that only 34% of women are consuming 400 micrograms of folic acid daily.

Chronic Disease Prevention and Health Promotion: The majority of data for this program will not be available until the summer of FY 2001.

Environmental Health: CDC has achieved its FY 2000 target of methods to measure 8 additional substances and exceeded the target number of toxic or potentially toxic substances measured in the U.S. population (from 25 substances to 27 substances).

In FY 2000, CDC provided funding to 8 additional states to begin development of their core Asthma programs, bringing the total number of states with asthma funds to 12, exceeding the expected target of 8.

CDC has developed a new performance measure to ensure that supported states establish a system that determine the number of children participating in Medicaid who are being screened for elevated blood lead levels. The FY 2000 target for this measure was 15%, but the actual performance was 12.5%.

Epidemic Services: CDC met its targets for FY 2000 goals to enhance the scientific quality and public health applicability of the *MMWR* to communicate public health news about disease outbreaks and trends in the health and health behavior by publishing 86 issues of the *MMWR*. Notable in the FY 2000 publications is the establishment of CDC's 1st on-line Continuing Education Program for Physicians, Nurses and Public Health Practitioners developed in response to the demand for more continuing education for public health practitioners.

The Epidemic Intelligence Service (EIS) Program coordinated 74 Epidemic Assistance Investigations (Epi-Aids) and over 300 state-based field investigations. This exceeded the target for responding to "at least 95%" of the requests for epidemic assistance from domestic and international partners.

The Public Health Prevention Service (PHPS) program was established as a 3-year program of training and service to develop a work force skilled in applying pertinent research related to epidemiology, social and behavioral science, and other public health sciences. Currently there are 75 Prevention Specialists in the PHPS program. Fifty are in state and local health departments and 25 are in assignments at CDC. In FY 2000, CDC was unable to meet the target of "90% of the first class of the PHPS will remain in public health and 50% will be working in state and local health departments" (actual performance 70% remained in public health and 26% are in state and local health departments).

CDC met its targets for building expertise to conduct prevention effectiveness studies of public health interventions and will continue to determine what prevention strategies work and what it costs to implement them.

Health Statistics: CDC has met or exceeded all FY 2000 performance measures. Highlighted below are just a few of its achievements in the area of health statistics:

- After successfully completing a pretest in 1999, the latest NHANES is able to assess the status of the population relative to emerging health issues, such as physical fitness, tuberculosis, and exposure to volatile organic compounds.
- The States and Local Area Integrated Telephone Survey began full operation in Fall 2000, and will provide state-specific estimates of health insurance coverage for all children, and national estimates for the reasons why low-income uninsured children are not enrolled in Medicaid or SCHIP.
- CDC exceeded the 5% reduction time lag for the release of data from the major data systems.
- Virtually all CDC statistical publications are available on the Internet at the same time they are released in published form.
- For the first time, charts from *Health, United States, 2000* will be updated with current information on the Internet, making data more timely and accessible to users and speeding up the release of data on high-priority topics.

HIV/AIDS, STD & TB Prevention: Much of the data assessing this program will not be available until late Summer 2001. However, based on the available data, CDC has met or exceeded most of its targets as highlighted below:

- As of December, 2000, 41 states (target =40), Puerto Rico, Guam and the Virgin Islands conducted surveillance for HIV infection. CDC anticipates that by 2003, pending available resources, all States will have implemented HIV surveillance as an extension of their AIDS surveillance activities.
- Acute blood-borne viral infections are monitored in the hemophilia population through patient enrollment in the Universal Data Collection (UDC) system. Viral testing and reporting of these acute infections is closely monitored. This specimen bank can also be used for look-back investigations for other blood-borne diseases. In FY 1999 and 2000, performance exceeded set targets because CDC brought centers online at a more rapid pace than expected.
- Until HIV data are available nationwide, data on the number of persons living with AIDS (AIDS prevalence), together with the data on the prevalence of those with a diagnosis of HIV infection (where available), will prove more useful than AIDS incidence data for public health planning purposes. AIDS incidence data will be more useful in identifying populations that were diagnosed late with HIV infection or require improved access to timely testing and treatment. Beginning in 2001, new methodologies are expected to be available to measure HIV incidence. Because the proposed incidence studies will be more complex and expensive than the prevalence studies of the past, it is not feasible to include as many study sites. Therefore, the numbers of sites will decrease from 53 to 30.
- Recently, with funding from the Minority AIDS Initiative (MAI), including MAID funding from DHHS, CDC has been able to expand the number of awards to directly funded CBOs. In 1999 and 2000, over 90 additional awards were made, bringing the current number of awards to directly funded organizations to more than 230. The majority of these programs address the needs of persons who are considered to be at high-risk for HIV infection, including men who have sex with men, injecting drug users, youth, homeless persons, sex workers, and/or incarcerated persons.
- CDC has recently awarded 20 grants for community coalition planning projects intended to sustain, improve, and expand HIV prevention services for racial/ethnic minority populations. In FY 2000, CDC extended the planning phase of this grant for an additional year. In FY 2001, CDC plans to fund a subset of 10 of these grantees to implement community coalition development projects.
- In FY 2000, CDC expanded technical assistance and support to improve national surveillance programs for HIV, STDs and TB to 13 countries and regions, which was less than the expected target of 15 countries and regions.

Immunization: By all counts, efforts to protect children in the U.S. from vaccine-preventable disease have been a success. Cases of most vaccine-preventable diseases of childhood are down more than 97% from peak levels before vaccines were available. No cases of paralytic polio due to indigenous transmission of wild polio virus have been reported in the U.S. since 1979. *Haemophilus influenzae* type b (Hib) invasive disease, the main cause of bacterial meningitis, has declined by more than 99% in children under five since the introduction of the vaccine. Measles hit a low of 67 reported cases in 1999. Coverage levels for preschool children are at an all-time high for all racial and ethnic groups.

Among persons 65 years of age or older, the percentage receiving vaccine against influenza rose from 33% in 1989 to 64% in 1998. Similarly, the coverage rate for pneumococcal vaccine increased from 15% to 46% over the same period.

The reduction in the number of indigenous cases of mumps has exceeded our goal of 500 cases. In 1999, there were only 387 cases of mumps; in 2000, the incidence was further reduced to 323 cases. This reduction is linked to the effectiveness of the Measles-Mumps-Rubella vaccine and its coverage rate.

In 2000, the coverage rate for four doses of Diptheria-Tetanus-Pertussis (DTaP) containing vaccine did not yet achieve the 90% goal. However, the rate has steadily increased since the change to a four dose schedule, as recommended by ACIP in 1991.

On the global front, as with smallpox, worldwide eradication of polio is now within our grasp. In 1999, the American Region of WHO completed its eighth year without a reported case of polio. The Western Pacific Region (i.e., China Vietnam, and Cambodia) is close to achieving regional eradication of polio. More than 80 countries conducted mass immunization campaigns in 1999 vaccinating over 450 million children aged less than 5 years. As of December, 2000, CDC supports more than 120 experts in polio eradication programs throughout the world. One hundred twenty-eight public health professionals throughout CDC were trained in 2000 to complete additional short-term assignments. Additionally, measles cases in the Western Hemisphere have declined 85% from 1990 to 1998.

Infectious Diseases Control: Some of the information needed to assess FY 2000 performance is not yet available, however the following will highlight significant achievements based on current data:

- Through FY 2000, 73 scientists will have completed the EID laboratory fellowship program. This fellowship is a training program in infectious disease laboratory methods and practice designed to attract and prepare laboratory scientists for careers in public health.
- In FY 2000, 43 sites–39 states and 4 local health departments–were funded for the Epidemiology and Laboratory Capacity (ELC) program. The purpose of the ELC program is to assist State and eligible local public health agencies to strengthen the public health infrastructure to address infectious disease threats. The infrastructure developed though the ELC program was crucial in the response to the outbreak of West Nile virus in the New York metropolitan area.
- In FY 2000, using FoodNet and other data, CDC updated estimates of the burden of foodborne disease in the United States; each year there are 76 million cases of foodborne illnesses resulting in 325,000 hospitalizations and 5,000 deaths. Also, FY 1999 FoodNet data showed that rates of *Campylobacter* (26%), *Shigella* (44%), *E. coli* (22%) and *Salmonella enteriditis* (48%) have declined; these findings led to new interagency efforts in research and surveillance to document the effectiveness of new food safety control measures.
- CDC has made substantial progress toward reducing perinatal group B streptococcal disease, the most common cause of severe infections in newborns. Providers and obstetric departments have quickly adopted recommended prevention strategies, resulting in a decline in disease that is more rapid than expected. CDC worked with the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics to develop guidelines and information for practitioners on the best methods for preventing group B streptococcal disease. Surveys have shown that the prevention recommendations have been widely adopted. According surveillance data, neonatal group B streptococcal infections have declined 70% since 1995, the year before the prevention recommendations were published. To improve prevention efforts, CDC staff are working with ABCs personnel to assess missed opportunities for prevention and will be meeting with representatives from the American College of Obstetrics and Gynecology and the American Academy of Pediatrics to review the 1996 prevention guidelines.
- The target number of domestic and international sites for influenza surveillance was exceeded because of diligent recruitment for the U.S. Sentinel Physicians Surveillance and consistent follow-up from the CDC influenza program staff.

Injury Prevention and Control: Data is available to assess the majority of the performance measures for this program, with most measures being met or exceeded at this time. Below are highlights from FY 2000 performance information:

- Intervention and evaluation phases of several youth violence prevention projects have ended, final reports are being received, and an analysis of he outcomes will take place in FY 2000. In a baseline measure at the beginning of one of the projects to prevent violence among middle-school students, 50% of the students reported incidents of physical fighting. CDC achieved the FY 2000 target for a 30% reduction in reported incidents of physical fighting. Final reports from this round of projects are being received and will be analyzed in FY 2000.

- Projects in three state health departments are progressing well in collecting data on family and intimate violence and in implementing and evaluating interventions; four multifaceted community-based projects are identifying successful methods for delivering family and intimate violence interventions at the community level and determining if these programs can reduce the violence; and fourteen projects are developing and evaluating coordinated community responses and the primary prevention of family and intimate violence.
- CDC began funding CPSC's National Electronic Injury Surveillance System (NEISS) in FY 2000 for the first time which will allow for a direct national estimate of emergency department visits for bicycle-related health injuries. Although these data were received in March 2001, sufficient time is not available to conduct an analysis for this reporting period. A final determination of bicycle-related ED visits will be completed by May 2001.

Occupational Safety and Health: NIOSH conducts both intramural and extramural research, allocating 75% of new research grant funding to its extramural program. NIOSH has established and achieved annual targets to increase investments in NORA-related research. For example, in 1996 NIOSH invested 50% of its extramural funds in NORA priority areas. This climbed to 92% in 1999. To extend the reach and impact of NORA and to leverage federal research dollars, NIOSH had developed joint funding opportunities with other federal agencies. These government partnerships have grown from 3 in 1998 to 11 in FY 2000.

NORA has begun to shift the spectrum of occupational, safety and health research to achieve more balance between problem identification research and problem solving research, as evidenced by an eight-fold increase in NIOSH funding of intervention effectiveness research between 1996 and 1999. These types of studies provide crucial information to employers, workers, and others on the effectiveness of specific strategies for preventing workplace injury and illness. In FY 2000, 10% of total NORA funding was attributed to Intervention Effectiveness Research.

In FY 2000, NIOSH's commitment to NORA is reflected through the impressive upward trends in the amount of both intramural and extramural research funding. In FY 2000, NIOSH funded 165 extramural research grants in several NORA research priority areas, making this the largest infusion of extramural funding ever by the federal government for occupation safety and health research. NIOSH increased its overall investment in NORA-related research by $60.1 million compared to FY 1996 (390% increase). This was achieved through congressional support and the reinvestment of research funds into NORA priority areas.

Preventive Health and Health Services Block Grant: Eighty-two percent of total required data from all programs funded by the PHHS Block Grant were reported to CDC in FY 1999, therefore, CDC exceeded its FY 1999 goal. The Block Grant FY 2000 Uniform Data Sets will not be collected until February 1, 2001. The reason for the delay is due to data sources for existing federal and state data are tabulated on a calendar year basis. The PHHS block grant supports all areas contained within Healthy People 2000.

Public Health Improvement: In FY 2000, CDC increased the number of health service providers participating in distance learning activities from 135,000 in FY 1999 to 148,000. This increase was enabled through partnerships with other Federal agencies and with public health practice and academic organizations. Similarly, the number of states served by state and regional leadership development programs was increased from 32 in FY 1999 to 34 in FY 2000, two more than the target. It was possible to exceed the target because states already operating public health leadership programs could leverage their limited resources to assist new states. The number of public health professionals trained in management practices and who conduct training for public health agency managers in their home developing countries increased from 142 in FY 1999 to 159 in FY 2000, one less than the target. One of the enrolled participants in the Management in Public Health training course was unable to attend because of unforessen difficulties in obtaining a U.S. travel visa.

The FY 1999 funding supported Prevention Research Grants for fifty extramural research projects, most for a term of three years. All awards were made following rigorous external peer review. Funds made available from projects with shorter terms supported three additional research grants in FY 2000. Awards were made to academic research institutions in twenty-one states and all ten Department of Health and Human Services regions. Institutions receiving awards included academic health centers, schools of public health, and university-affiliated programs (e, g., teaching and research affiliates of medical schools including health departments and managed care organizations.) Awards were also made to support research in academic engineering, communications, public policy, and nursing institutions. Approximately 83 percent of all appropriated funds was awarded extramurally. The balance supported program operations and administration (scientific personnel, design of peer-review mechanisms and research grant administration).

REACH 2010 is a demonstration project, the goal of which is to contribute to eliminate health disparities experienced by racial and ethnic minorities by the year 2010. As a demonstration project, outcomes measures are critical in order to show that strategies developed can and did make a difference to communities served and to many other communities through technology transfer. Phase I activities include the development of evaluation measures by each project. In FY 2000, CDC funded 24 Phase II projects, 14 Phase I projects and 4 new projects serving the elderly through an interagency agreement with the Administration on Aging. In FY 2001, CDC anticipates funding a limited number of Phase II grantees, new AI/AN grantees and applied research projects. In FY 2001, planning (Phase I) communities are establishing infrastructure to support community-level data collection, establishing collaborative partnerships (e.g., state and local health departments, community organizations, and academia), establishing linkages with other state and local agencies, and working with federal agencies and other partners to identify promising prevention strategies that have the greatest potential for reducing the health disparities in the target populations.

CDC is building a national integrated surveillance system. This system allows rapid reporting of disease trends to control outbreaks. It creates public and private health care sector linkages to increase the volume, accuracy, completeness, and timeliness of the data available for disease monitoring. Goals for FY 2000 in all areas for this program were met. Funding was made to 12 states for element development and 2 states to be charter states, which means they are in the process of development of the full system. There are 10 states that are currently transmitting laboratory results electronically. Data standards are currently under review with the intention of implementing the Base System in 2 states for pilot testing in FY 2001.

Buildings and Facilities: As of December 2000, implementation of the Atlanta Master Plan is proceeding substantially according to schedule, with adjustments to reflect the difference between planned and actual appropriations.

The 2000-2009 Atlanta Master Plan strategy, consisting of four 5-year increments, will allow CDC to modernize existing laboratory and support facilities where economically and programmatically feasible, and construct new facilities when required, as well as to properly operate and maintain existing facilities.

As of December 2000, implementation of the Atlanta Master Plan is proceeding substantially according to schedule, with adjustments to reflect the difference between planned and actual appropriations.

Bioterrorism: A total of 36 laboratories from government agencies, universities, research institutions, and commercial entities have been inspected under the Select Agent rule to ensure the safe transfer and use of human pathogens.

In FY 2000 all 50 states and 4 localities were funded for this component of the cooperative agreement: 50 for core capacity and 8 for special projects. States and localities have used their cooperative agreement funds to enhance their capacity to investigate and mitigate health threats posed by

bioterrorism agents. CDC expected to fund 40 health departments for this component in FY 2000. Increased funding for upgrading state and local capacity allowed for funding 14 additional sites.

Currently 43 public health laboratories receive funds to enhance their capacity for identification of biologic agents. All of these laboratories are also members of the National Laboratory Response Network.

CDC expected to fund 4 health departments for this component in FY 2000. Increased funding for upgrading state and local capacity allowed for funding 1additional site.

In addition to providing support for 4 additional sites for enhanced communications capacity, an annual meeting focused on health alert efforts (such as internet connectivity, broadcast alert, and distance learning) was held in August.

Forty chemicals were added to the Rapid Toxic Screen in FY 2000 for a total of 90 methods. We did not meet our FY 2000 goal of 100 substances because of the difficulty of obtaining standards for several of the chemical agents. This difficulty is largely due to the dangerous nature of these substances.

This readiness and maintenance of the national stockpile having been achieved on schedule, the NPS Program has expanded to focus on state preparations, as a result of the national TOPOFF-2000 readiness exercise. TOPOFF demonstrated that a critical component of the overall NPS Program is the ability of an impacted area to interact with the NPS Program in the event of a terrorist incident.

Office of the Director:
Information Access: The CDC Voice/FAX Information Service (VIS) continues to be an important dissemination method for public and practitioner information. However, usage is down from the previous year. While the numbers are lower than the previous year, the numbers were still significant – average monthly calls received were over 46,000 and over 14,000 requests for documents to be faxed.

Information Security and Integrity: FY 2000 Information Security goals were met with no serious losses, alterations or releases of critical data.

Financial Management Processes: CDC's first financial statement audit was performed in FY 1997, and CDC received a qualified opinion. Since FY 1997, CDC has received 3 consecutive unqualified opinions for the fiscal years 1998, 1999 and 2000. While CDC is pleased with the success of the financial audits, CDC is also devoting significant resources to upgrading the accounting system, improving management controls over budget execution and increasing the training opportunities for financial staff members.

Recruitment and Retention of Qualified and Diverse Workforce: The overall goal of reducing the time to refer candidates by 25% was met - 80 days baseline reduced to 59.3 days (a 25.9% reduction) That portion of the overall time which was job classification was reduced from 15 days to 13.9 days.

Part II
2.0 Program Planning and Assessment and Reporting

Introduction

This document includes CDC's Final FY 2002 GPRA Annual Performance Plan, FY 2001 Revised Final GPRA Annual Performance Plan, and FY 2000 GPRA Annual Performance Report. As indicated in the performance measurement charts, the FY 2000 and FY 2001 measures represent actual targets based on appropriated funds. The 2002 Performance Measures are estimates of CDC's targets based on FY 2002 current services budget. Any changes in the FY 2001 and FY 2002 performance measures from previous submissions are based on appropriated funding levels unless otherwise referenced within the performance measurement tables. Data supporting actual performance for the FY 2000 report has been included with this draft submission for data that is currently available. A reference (**Ref.**) column has been included in the tables to link the program goals and objectives to the page number of the appropriate budget section that supports a particular goal and measure. A checkmark in the reference column indicates new FY 1999 data that was not available to report in the FY 1999 Performance Report.

CDC's Performance Plan discusses performance objectives and measures by functional areas. The plan is organized in this way to provide the reader with an understanding of how programs within the agency complement and relate to one another. Diverse centralized support services are provided to all program areas, crossing program activity lines. In developing performance measures for non-centralized services, we attempted to link objectives and measures to the program activity lines and provide outcome measures whenever possible. However, we also looked at programs realistically, taking factors into consideration that may have an effect on performance measures. These factors included:

Program maturity and the relative need for capacity building in certain areas.
Availability of annual data to measure performance.
Latency periods associated with particular disease-specific programs.
Input from our partners.

2.1 Birth Defects/Developmental Disabilities/ Disabilities and Health

2.1.1 Program Description, Context, and Summary of Performance

Birth defects occur in three out of every hundred births in the United States. CDC is actively engaged in multi-faceted efforts to monitor trends in birth defects over time, determine what causes birth defects, develop prevention strategies, and evaluate their effectiveness. However, prevention becomes possible only when causes or risk factors of birth defects are known. Thus, reduction in the incidence of specific birth defects cannot be used to measure performance. Other factors that hamper efforts to measure progress toward reducing the number of birth defects include the fact that some birth defects require a prohibitively large number of births to be monitored in order to draw conclusions about changes in the rates. In addition, environmental and behavioral factors may vary geographically.

2.1.1a Birth Defects Prevention

Birth Defects Surveillance
Because of the difficulty in assess causes or risk factors of birth defects, state based information is very important. CDC has thus chosen to emphasize ongoing efforts to increase the number of states (and thereby the number of births) that are monitored through high-quality birth defect surveillance systems. The network being developed is designed to share data, resulting in the availability of more information available about rare defects and geographic variations. Developing a network of state-based birth defect surveillance programs that are sharing data regarding cases of birth defects will improve CDC's ability to monitor trends and geographic variations in birth defect rates across the country. This will result in an enhanced ability to measure performance of birth defect prevention programs, including the national folic acid awareness and education program. The Network is developing standards regarding minimum data sets and criteria for membership, enabling us to track our progress at minimal cost. This type of collaborative data-sharing has resulted in breakthroughs regarding possible prevention strategies and has led to major prevention efforts such as those directed at increasing women's consumption of folic acid to prevent the serious and common birth defects spina bifida and anencephaly. This exciting prevention opportunity is highlighted in CDC's second birth defects prevention objective, and as more birth defects prevention breakthroughs are made, new objectives will be added.

Folic Acid Campaign
One preventable birth defect with a known cause is spina bifida. It has been determined that adequate consumption of folic acid by women of childbearing age reduces the incidence of this defect. The reduction of folic acid-preventable spina bifida and anencephaly as a result of women's increased consumption of folic acid is the focus of CDC's second goal for its Birth Defects Prevention Program. We currently do not have the ability to measure decreases in the rate of spina bifida and anencephaly on a national basis. We can, however, measure changes in the number of women consuming sufficient folic acid through nationally representative biennial surveys. These surveys were implemented to assess the performance of our efforts, prior to the development of our GPRA measures. The surveys are being conducted every other year, costing about $100,000 per survey. The development of the National Birth Defects Prevention Network mentioned above will enable us, in the future, to monitor trends in the incidence of spina bifida and anencephaly.

Partnerships and Links to DHHS Strategic Plan
These performance objectives are related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and DHHS Goal 5: Improve the Nation's public health systems.

Performance Summary

The National Birth Defects Prevention Network achieved the designated target of 30 states for FY 1999. The FY 2000 target of 35 states was not achieved; however, this shortfall occurred only because the Network has made the requirements more stringent for data to be included in the annual report. Thus, though the report for FY 2000 will contain data from only 26 states, the data will be of higher quality than in previous years. States not able to meet this new standard may take a few years to achieve the new standard. Therefore, we are also not likely to meet the 2001 objective of 38 states, but the quality of the data being accepted has been considerably improved and will thus be more useful. Similarly, the FY 2002 target has been adjusted to reflect this new criteria. CDC is very conservative regarding membership criteria for this GPRA. objective. Only data from health departments that have solid surveillance programs are used. Headway is being made in the number of states participating and thus also in the percentage of births being monitored. Fully 58% of births in the U.S. are currently being monitored for various birth defects. Such a high monitoring rate will help supply crucial information about changes in birth defects rates, which could provide information on the causes of certain birth defects.

Research related to the benefits of folic acid has led to one of the first population-based prevention efforts for birth defects. The research indicated that the consumption of at least 400 micrograms of folic acid daily by women of childbearing age will reduce the prevalence of spina bifida and anencephaly. Based on this research, it was decided to fortify the American food supply with folic acid to help ensure that women were receiving the necessary amount of folic acid to prevent birth defects. Blood folate levels of the American public have increased significantly since all "enriched" cereal-gram products were fortified with folic acid in late 1997 (required no later than January 1998). During this time there has also been a 9% increase in the number of women who report consuming supplements containing 400 micrograms of folic acid daily. This higher folate blood level may be beginning to be reflected in lower rates of spina bifida. Rates of spina bifida and anencephaly are declining but, since the rates have shown dramatic short-term fluctuations in the past, it may take several years to be certain of the permanent impact of folic acid fortification and education.

Unfortunately, eating fortified food products alone may not provide a woman with sufficient daily folic acid to prevent birth defects. In order to address this potential gap, CDC has used existing funds to invest in high-quality health communication research to develop and test effective audience-data driven messages. This research is being shared with our partners to allow them to conduct an educational campaign on the health benefits of folic acid. Based on the communication research, CDC and the partner organizations have created several award-winning public service announcements (PSAs) that deliver the messages that are the cornerstone of the educational campaign. As the trend in actual performance provided below indicates, evaluation has shown a positive effect in encouraging women to commence a new health behavior. Based on the consumption rates for FY 2000 (the first year that data was available since this performance measure was established), CDC believes that the potential impact of a voluntary education campaign was initially overestimated. To date, the voluntary partnership (which includes a diverse group of over 30 national organizations) has met many challenges, including the fact that some partnership organizations have not achieved the performance level originally committed to and that resources have been less than expected for the campaign at the local levels. Another challenge facing the partnership is that the PSAs are aired by media outlets on a voluntary basis. As a result, the PSAs do not receive the level of air time that a paid advertisement would receive. We believe the lack of prime air time may have resulted in the message having less of an impact on the target audience than originally anticipated.

Since CDC and the partner organizations are using existing funds to ensure that quality educational PSAs are developed and tested for use by the campaign, we are continuing to rely on voluntary placement of the PSAs. CDC has met regularly with the members of the partnership to help them maintain their commitments to the partnership or adjust the projected outcomes of the campaign to reflect a more accurate expectation by the partners. Regardless, awareness and knowledge about folic acid and birth defects have significantly increased during the campaign. Creating a behavior change (i.e., getting women to consume enough folic acid) is much more challenging and requires a long-term commitment, since we do not have direct control over people's eating habits. Thus, the actual performance for FY2000 falls short of the target of 40%. Even though the initial impact of the education campaign has not been as dramatic as originally hoped, CDC intends to continue to support the prevention of folic acid-preventable birth defects and has adjusted future targets to realistically reflect the impact of a voluntary education campaign to encourage women to commence a new health behavior.

2.1.2a Goal-by-Goal Presentation of Performance

Note: The reference column (Ref.) indicates the page numbers for programs listed in the document, *Justifications of Budget Estimates to OMB*, that correspond to the program's goals, objectives, and targets listed in the CDC performance plan. The FY 2002 OMB submission does not contain reference pages because the document, *Justifications fo Budget Estimates to OMB*, has not been completed and will be submitted to OMB following the GPRA submission. A check mark in this column indicates new FY 1999 data that has been collected, analyzed, and reported since January 2000. The Budget figures are based on FY 1999 Actual, FY 2000 Actual, FY 2001 Final Appropriation, and FY 2002 Estimate. Budget comparison data on the new budget structure for FY 1999 is not available for this April 2001 Congressional Justification submission, but will be available by October 2001.

Performance Goal: Increase the understanding of the prevalence of birth defects.

Performance Measure	Targets	Actual Performance	Ref.
Number of states participating in the National Birth Defects Prevention Network.	**FY 02:** 38 states. **FY 01:** 38 states. **FY 00:** 35 states. **FY 99:** 30 states.	**FY 02:** **FY 01:** **FY 00:** 26 states. **FY 99:** 30 states. **FY 97:** 21 states.	Page 118

Performance Goal: Increase the number of women who consume 400 micrograms of folic acid daily.

Performance Measure	Targets	Actual Performance	Ref.
Increase the percent of women of reproductive age who will be consuming 400 micrograms of folic acid daily.	**FY 02:** 36% women consuming folic acid. **FY 00:** 40% women consuming folic acid. **FY 99:** 35% women consuming folic acid.	**FY 02:** **FY 00:** 34% women consuming folic acid. **FY 98:** 32% women consuming folic acid. **FY 96:** 25% women consuming folic acid.	Page 118

2.1.1b Developmental Disabilities/Disabilities & Health

CDC's efforts related to disability and health focuses on the prevention of secondary conditions and health promotion among persons with disabilities. Emphasis is on scientific support for surveillance of disabilities, on cost-effectiveness of prevention strategies focused on secondary conditions and health promotion activities, and on identifying risk and protective factors for secondary conditions. This is implemented by providing funds to states for public health activities addressing the needs of people with disabilities. The program emphasizes secondary conditions that cross diagnostic categories and focus on broader disability areas. This is a relatively new approach to prevention programs for CDC, which historically focused on the primary prevention of disabling conditions The program is focusing on activities that will enhance the ability to measure performance in this new area. This performance measure reflects a first step toward building a data collection system that will enable CDC to monitor trends related to health and quality of life among people with disabilities.

Partnerships and Links to DHHS Strategic Plan
This objective is closely linked to DHHS Goal 5: Improve the Nation's public health systems.

Performance Summary

Currently, there is no data collection system in place that could be used to measure outcomes that focus on actual improvements in the quality of life of people with disabling conditions. As a result, the performance goal that has been selected for this program involves increasing the ability to understand and characterize the health status of Americans with disabilities. As part of ongoing strategic planning efforts, the program has refocused its efforts on promoting health and improving quality of life among people with disabilities. This position represents a change in direction for CDC's disabilities program, which previously focused on prevention conditions associated with disabilities. FY 1999 was the first year that CDC funded states to address these issues.

CDC has previously relied on states participating in the disability module of the Behavioral Risk Factor Surveillance Survey (BRFSS) as a major source of information about the health status of Americans with disabilities. Initial results from the disability module were found to be less than adequate for the intended purposes. In response, during FY 2001, "disability status" as a demographic variable will begin to be included annually in the core set of information collected as part of the BRFSS. CDC anticipates that the information from this new demographic category will allow a better understanding of the health status of Americans with disabilities. Additionally, CDC is working to revise the BRFSS disability module to ensure that the information provided by the module more directly meets the needs of the program and people with disabilities.

Efforts to expand the number of states that participate in a disability module of a national survey have been highly successful during FY 1999. Through the combined efforts of CDC and our state partners, we have been able to surpass the target for the number of participating states. CDC funded 14 states, and the other two states participated in an unfunded capacity, for a total of 16. It is anticipated that during FY 2002, when the 4-year grant issued in 1998 expires, CDC will re-compete the grant and expand the number of states who are participating in the BRFSS disability module to 20 states.

2.1.2b Goal-by-Goal Presentation of Performance

Performance Goal: Increase the ability to understand and characterize the health status of Americans with disabilities and to compare that status to Americans without disabilities.

Performance Measure	Targets	Actual Performance	Ref.
States will have begun using the Behavioral Risk Factor Surveillance Survey (BRFSS) disability module.	**FY 02:** 20 states. **FY 01:** 14 states. **FY 00:** 14 states. **FY 99:** 15 states.	**FY 02:** **FY 01:** **FY 00:** 16 states. **FY 99:** 16 states. **FY 98:** 0 states.	Page 118
Total Program Funding (Dollars in thousands)	FY 2002: $ 76,280 **FY 2001:** $ 70,733 **FY 2000:** $ 49,942 **FY 1999:** 10/2001	(Estimate) (Final Appropriation) (Actual) (Actual)	

Verification/Validation of Performance Measures: This performance measure will be verified by reviews of the reports required by cooperative agreement recipients. CDC project officers will verify on a regular basis that the individual requirements under the agreement have been completed. Based on this review, CDC will be able to verify which states are currently using the disability module.

2.2 Chronic Disease Prevention and Health Promotion

2.2.1 Program Description, Context and Summary of Performance

The United States cannot effectively address escalating health care costs without addressing the prevention of chronic diseases for the following reasons:

- More than 90 million Americans live with chronic illnesses.
- Chronic diseases account for 70 percent of all U.S. deaths.
- More than 60% of the $1 trillion total cost of health and medicare care is attributable to chronic diseases.
- Chronic diseases account for one-third of the years of potential life lost before age 65.

The increase in the proportion of older Americans, largely due to the aging of the baby boom generation, means that an effective public health response to chronic and disabling conditions must be developed now. Cancer will strike more than 1.3 million Americans this year. More than 40% of all deaths in the United States each year are directly attributable to heart disease and stroke. The impact of conditions such as arthritis, osteoporosis, Alzheimer's disease, and urinary incontinence on our society is considerable and will grow as our population ages. These and other conditions result in disability and decreased quality of life for millions of Americans.

Prevention of the occurrence and progression of chronic disease is based on reducing or eliminating

behavioral risk factors, increasing the prevalence of health promotion practices, and detecting disease early to avoid complications. Prevention programs have been shown to be effective. For example, Michigan established a diabetes care and education program with hospitals, health departments, and home care agencies. Participants in the program experienced a 45% lower rate of hospitalizations, a 31% lower rate of lower-extremity amputations, and a 27% lower death rate than non-participants. In addition, the Arthritis Self-Help Course, a six-week course that teaches people how to manage their arthritis and minimize its effects, has been shown to reduce arthritis pain by 20% and physician visits by 40%.

When developing performance measures for chronic disease prevention programs, several factors tempered our consideration. These factors included:

The long latency of chronic diseases.

- Chronic diseases include the three leading causes of death in the United States--heart disease, cancer, and cerebrovascular disease–which account for nearly two-thirds of all deaths. Multiple behavioral risk factors such as smoking, poor diet, and lack of exercise often become habitual during youth or early adulthood and contribute to the development of these chronic diseases over long periods of time.

- Health outcome measures are particularly problematic for chronic disease prevention programs because of the long latency period of many chronic diseases. For instance, reductions in smoking rates will not produce reductions in lung cancer deaths for decades. Further, behavior change itself is adopted slowly. Many of the most effective interventions are aimed at preventing youth from adopting risky behaviors, while the positive outcomes associated with these interventions are not reaped until adulthood. Over time, Americans can be influenced to adopt healthier behaviors, but such progress rarely results in significant or startling changes on an annual basis.

The relatively recent development of chronic disease programs and hence the need for objectives focusing on state capacity to address chronic diseases.

- Chronic disease programs are relatively new in the public health world. For example, only recently have all states received funding for diabetes control programs. 1998 marked the first year of CDC's state-based cardiovascular disease prevention program, when CDC funded 8 states. Because of the newness of chronic disease programs, many states are still putting into place the basic infrastructure of people, networks, and systems needed to conduct effective prevention programs. Further, with the exception of the National Breast and Cervical Cancer Early Detection Program, none of CDC's chronic disease programs are focused on service delivery. Instead, they are focused on developing the policies, environments, and systems which are supportive of healthy behavior and appropriate health care.

The availability of annual data to measure performance.

- CDC's data collection systems for monitoring chronic diseases are collected annually for adults (BRFSS), but only biennially for adolescents (YRBSS). While these data collect valuable information about the chronic disease behavioral risk factors, they are not designed to collect specific outcome data on chronic diseases.

The opinions and recommendations of our key stakeholders.

- CDC's efforts to achieve improvements in health behaviors, appropriate health care, and chronic disease burden are dependent on collaborative relationships. Reductions in our nation's future chronic disease burden will depend on the commitment and success of programs coordinated by CDC and a broad range of efforts by health care providers,

medical and public health researchers, state and local public health and education agencies, insurers and payers of private medical insurance, other Federal agencies, and the private and nonprofit sectors. CDC's key chronic disease partners have voiced concern regarding their ability to demonstrate specific outcome measures related to chronic disease issues and are committed to a balance between outcome and process objectives.

Recognition that efforts to reduce the burden of chronic diseases must involve multiple public, private, and nonprofit entities across the country.

- Chronic diseases are a community-wide burden. CDC partners with leaders of state and local health and education agencies, academic institutions, national organizations, nonprofit agencies, business and philanthropies to reduce the burden of chronic diseases

2.2.1a Heart Disease and Stroke

Cardiovascular disease (CVD) is the Nation's number one killer among men and women of all racial and ethnic groups. More than 40% of all deaths in the United States, 900,000 each year, are directly attributable to heart disease and stroke. Associated annual costs exceed $286 billion. Cardiovascular disease is the leading cause of death in all States. CDC is taking a crosscutting approach to address the burden of heart disease and other health risks in the U. S. through the prevention of risk factors (e.g. tobacco use, physical inactivity, and poor nutrition), surveillance, epidemiologic research, and health promotion activities. CDC is implementing its crosscutting approach to heart disease and stroke prevention by building state-specific capacity for cardiovascular health promotion, first in those states with the greatest heart disease and stroke burden.

Major disparities exist among population groups, with a disproportionate burden of death and disability from cardiovascular diseases in racial/ethnic populations. For example, the rate of premature deaths caused by cardiovascular disease is greater among African-Americans than among white Americans. Disparities also exist in the prevalence of risk factors for cardiovascular disease.

CVD is likely to increase as the population ages, particularly among populations that have an increased risk of CVD and related risk factors. Scarce public health resources have prohibited development of an effective nationwide cardiovascular health (CVH) program. A nationwide CVH program is needed to provide comprehensive and effective interventions that move beyond traditional educational approaches and use policy and environmental strategies to promote CVH. To improve the cardiovascular health of all Americans, every state health department should have the capacity, commitment, and resources to carry our comprehensive CVH promotion, disease prevention and control programs.

CDC is building a nationwide program in cardiovascular health disease prevention by addressing primary and secondary prevention of CVD with emphasis on reducing the burden of disease and related risk factors. CDC is providing "core level" support to states to develop capacity to address cardiovascular disease and its risk factors. States funded at the core level are expected to develop seven capacities. CDC's current performance measure is representative of this capacity development process: 1) develop and coordinate partnerships; 2) develop scientific capacity to define the cardiovascular disease problem; 3) develop an inventory of policy and environmental strategies; 4) develop or update a state plan; 5) provide training and technical assistance; 6) develop population based strategies; and 7) develop culturally-competent strategies for priority populations. These seven capacities must be met in order to receive comprehensive funding.

CDC currently funds only four states at the comprehensive level. Two states were just recently funded at the comprehensive level in September 2000. These states are developing and disseminating key policy and environmental interventions. A primary focus of the interventions is reducing leading risk factors for cardiovascular diseases - lack of regular physical activity, poor nutrition, tobacco use, high blood pressure, and high cholesterol. As comprehensive states mature and implement interventions, CDC

plans to develop a performance measure to evaluate each states ability to influence policy and environmental interventions to prevent and control heart disease and stroke. Performance measures at the comprehensive level will consist of specific outcomes anticipated of the interventions. Examples of outcomes will be improvements at the health systems level in quality indicators for the appropriate treatment of congestive heart failure, stroke, and acute myocardial infarction that are routinely measured by state peer review organizations; and improvements in environmental indicators in communities, work sites and schools. Policy and environmental improvements are interim changes that must proceed behavior change and result in a reduction in mortality.

Partnerships and Links to DHHS Strategic Plan

These performance objectives are related to Objective 5.1 in the DHHS Strategic Plan. Objective 5.1 states "Improve the capacity of the public health system to identify and respond to threats to the health of the nation's population." To meet this objective, States have been funded at *Core and Comprehensive* levels. States funded at core level will develop capacities to reduce the burden of CVD, a major threat to the health and productivity of all Americans. The core capacities to be achieved are to (1) develop scientific capacity, (2) develop an inventory of policy and environmental interventions, (3) develop or update the CVH State Plan, (4) provide training and technical assistance, (5) develop population-based strategies, (6) develop a work plan to address priority populations, and (7) develop infrastructure as well as further develop data systems. States receiving comprehensive funds will enhance core functions and provide comprehensive and effective cardiovascular disease interventions.

Performance Summary

In FY 1998, 8 states were funded. Of the 8 funded states, 7 achieved 5 of the 7 core capacities. In FY 1999, 3 additional states were funded for a total of 11 states. Funding increase for FY 1999 was specifically designated to reduce racial disparities in CVD. These additional funds supported racial disparity prevention projects in 10 of 11 participating states, and supported 2 of the 3 additional core programs initiated in FY 1999. In FY 1999, all 11 participating states met at least 5 core cardiovascular disease prevention capacities. In FY 2000, 25 states were funded. Data will be available for the 25 States in June2001.

The State of New York, funded at the comprehensive level, is initiating programmatic efforts to make work sites more supportive of heart health through the provision of training to mor than 600 business and community leaders on the specifics of a heart healthy work site. Over 300 work sites are implementing changes to make it easier for their employees to be heart healthy during the workday by offering low-fat food choices in vending machines, being smoke-free, providing physical activity breaks during the workday, making stairwells safe, and encouraging employees to be physically active. New York is also working with the American Heart Association (AHA) to treat heart disease using the AHA guidelines. Also funded at the comprehensive level is North Carolina. North Carolina's CVH Program with South Carolina dn Georgia have formed a Tri-State stroke consortium to address primary and secondary prevention of stroke.

West Virginia, funded at the core level, provided a 3-day conference, "Cardiovascular Health in Appalachia: Partnering for Change," and brought together public health and health care providers to develop a vision for creating a heart healthy state. Another core-funded state program in Mississippi is implementing Sisters Together, a community-based intervention designed to encourage African-American women to maintain a healthy weight by becoming more physically active and eating healthier foods.

2.2.2a Goal-by-Goal Presentation of Performance

Performance Goal: Increase the capacity of CDC-funded, CVH State programs to address primary and secondary prevention.

Performance Measures	Targets	Actual Performance	Ref.
The number of states with 5 of the 7 core cardiovascular disease prevention capacities as delineated in Preventing Death and Disability from Cardiovascular Diseases: A State Based Plan for Action," and in CDC Program Announcement: CDC Cardiovascular Health Programs," will be increased.	**FY 02:** 15 states. **FY 01:** 15 states. **FY 00:** 11 states. **FY 99:** 8 states.	**FY 02:** 6/2003. **FY 01:** 6/2002. **FY 00**: 6/2001. **FY 99:** 11 states. **FY 98:** 7 states.	Page

Verification/Validation of Performance Measures: State information on core cardiovascular disease prevention capacities will be collected annually and evaluated by CDC through an annual evaluation report.

2.2.1b Diabetes

Almost 16 million people in the United States have diabetes, with approximately 800,000 new cases each year or 2,200 new cases each day. The number of individuals with known diabetes has increased steadily, especially within selected racial and ethnic communities. Diabetes remains the 7th leading cause of death in the U.S. People with diabetes also suffer significant complications such as kidney disease (approximately 30,000/year), high blood pressure (60 to 65% of people with diabetes have high blood pressure), amputations (approximately 57,000/year or 150/day); blindness among working aged adults (approximately 20,000/year or 60/day); and end-stage kidney disease (approximately 30,000/year or 70/day).

The goal of CDC's diabetes control program is to eliminate preventable diabetes-related morbidity and disability while improving the overall quality and length of life for all persons with diabetes. This effort requires a multifaceted approach that works to translate research findings into dinical and public health practice. The CDC diabetes prevention and control program emphasizes (1) support for state-based diabetes control programs in all 50 states to develop or expand diabetes control efforts in the state with additional funding for selected states to conduct comprehensive control efforts statewide; and (2) activities to improve the quality of care received by persons with diabetes.

Partnerships and Links to DHHS Strategic Plan
These performance objectives are related to DHHS Goal 4: Improve the quality of health care and human services, and specifically Objective 4.1: Enhance the appropriate use of effective health services. This goal area reflects the intent of having state programs adopt and promote patient care guidelines for persons with diabetes, which in turn enables both health care providers and patients to know what is needed for quality diabetes care. This effort, along with other educational and programmatic activities, should lead to an increase in foot and eye exams for diabetics.

CDC collaborates with the National Institutes of Health in providing federal leadership in the development, coordination and implementation of the National Diabetes Education Program (NDEP). CDC has primary responsibility for coordination the NDEP Partnership Network of over 100 organizations, coordinating several of the 10 NDEP planning workgroups, and administering the implementation of the NDEP community interventions component. CDC also collaborates with the Indian Health Service and other organizations in a partnership to establish the National Diabetes Prevention Center. Then National Diabetes Prevention Center will address the serious epidemic of diabetes in American Indians. Further, CDC collaborates with the Health Resources and Services Administration as part of the Health Status and Performance Improvement Collaborative in Community Health Centers. CDC's state-based diabetes control programs will partner with the community health

centers to improve the health status of people with diabetes who receive care at the centers.

In addition to state health departments, CDC collaborates with the American Diabetes Association, Juvenile Diabetes Foundation, American Association of Diabetes Educators, and managed care organizations in the control of diabetes and its complications.

Performance Summary

In FY 1999, 70% of the CDC-funded state DCPs adopted, promoted, and implemented patient care guidelines for improving the quality of care received by persons with diabetes. CDC is currently conducting 7 Prevention Research Studies to better understand how to apply diabetes scientific findings. Seventy-five percent of the DCPs have established the core capacities to : conduct surveillance; establish formal partnerships with medical, private, and non-profit organizations; maintain communication networks with collaborating organizations; assess quality of care of diabetes patients; increase public awareness. The BRFSS measures the percentage of diabetics who receive and annual eye exam and annual foot exam. Analysis of FY 1998 BRFSS data found that eye exams had a slight decrease while foot exams were fairly constant with the previous year. FY 1999 data indicates that there was a modest increase in eye and foot exams among persons with diabetes.

2.2.2b Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the prevalence of chronic and disabling conditions and improve the quality of life for those already affected by these conditions by building nationwide programs in chronic disease prevention and health promotion, and intervening in selected diseases and risk factors.

Performance Measures	Targets	Actual Performance	Ref.
Percentage of CDC-funded state diabetes control programs that will adopt, promote, and implement patient care guidelines for improving the quality of care received by persons with diabetes.	**FY 02:** 100% adopted guidelines. **FY 01:** 100% adopted guidelines. **FY 00:** 100% adopted guidelines.	**FY 02:** 12/2002. **FY 01:** 12/2001. **FY 00:** 6/2001. **FY 99:** 70% adopted guidelines. **FY 98:** 60% adopted guidelines.	Page 123

Performance Measures	Targets	Actual Performance	Ref.
Prevention research studies will be conducted to better understand how to apply clinical and public health practice and the results published in peer-reviewed journals.	**FY 02:** 8 prevention research studies. **FY 01:** 8 prevention research studies. **FY 00:** 7 prevention research studies. **FY 99:** 5 prevention research studies.	**FY 02:** 10/2002. **FY 01:** 10/2001. **FY 00:** 7 prevention research studies. **FY 99:** 4 prevention research studies.	Page 123
For all states that receive CDC funding for comprehensive diabetes control programs, increase the percentage of diabetics who receive an annual eye exam and annual foot exam.	**FY 02:** Eye 72%/Foot 62% (increase FY 96 baseline by 10%). **FY 01:** Eye 72%/Foot 62% (increase FY 96 baseline by 10%). **FY 00:** Eye 72%/Foot 62% (increase FY 96 baseline by 10%).	**FY 02:** 10/2003. **FY 01**: 10/2002. **FY 00:** 10/2001. **FY 99:** Eye 67.3 %/Foot 57.8%. **FY 98:** Eye 64.7%/Foot 56.5%. **FY 97:** Eye 65.6%/Foot 56.6%. **FY 96:** Eye 61.7%/Foot 52.4%.	Page 123
Percentage of the 58 State and Territorial Diabetes Programs that will have core capacities: surveillance of diabetes and diabetes-related conditions and risk factors; formal relationships with medical and private, nonprofit organizations; communication networks with collaborating organizations; assessment of quality of care of diabetes patients; and public awareness.	**Percentage of the 58 State and Territorial Diabetes Programs with core capacities:** **FY 02:** 100%. **FY 01:** 100%. **FY 00:** At least 85%. **FY 99:** At least 75%.	**Percentage of the 58 State and Territorial Diabetes Programs with core capacities:** **FY 02:** 12/2002. **FY 01:** 12/2001. **FY 00:** 6/2001. **FY 99:** Ranges from 69% to 100%. **FY 94:** 36%.	Page

Verification/Validation of Performance Measures: Performance will be verified through quarterly state reports to CDC and periodic site visits, demonstration of CDC development of studies, and, for efforts in Native American/Alaskan Native populations, program reports submitted to CDC and demonstration of the number of programs supported by CDC. The BRFSS (refer to Appendix A.2) measures the percentage of diabetics who receive an annual eye exam and annual foot exam.

2.2.1c Arthritis

Arthritis encompasses more than 100 diseases and conditions that affect joints and connective tissues. It affects nearly one of every six Americans–an estimated 43 million people, making it one of the most common diseases in the U.S. Arthritis is the nation's leading cause of disability, limiting daily activities for more than 7 million citizens. By the year 2020, an estimated 60 million people will be affected and over 11 million will have some disability because of arthritis. While all Americans are at risk of arthritis, the prevalence of these conditions rises dramatically with age and is higher among women than men. Compounding this picture are the enormous costs that our nation bears for treating arthritis and its complications and for the attendant disability. These medical and social costs total almost $65 billion.

CDC is working with others to implement the National Arthritis Action Plan: A Public Health Strategy (NAAP). The goal of CDC's arthritis program, consistent with NAAP, is to improve the quality of life among persons affected by arthritis by decreasing pain and disability, and improving physical, psychosocial and work function. This effort requires a multifaceted approach that works to translate research findings into public health practice. The CDC arthritis program emphasizes (1) support for state-based arthritis programs in 37 states to develop or enhance programs that address arthritis from a public health perspective; and (2) activities to better monitor the burden and impact of arthritis; (3) activities to increase awareness of arthritis and appropriate management of arthritis; and (4) efforts to improve the quality of care received by persons with arthritis.

Partnerships and Links to DHHS Strategic Plan

These performance objectives are related to DHHS Goal 4: Improve the quality of health care and human services, and specifically Objective 4.1: Enhance the appropriate use of effective health services. It also relates to Goal 5: Improve the Nation's public health systems. Because public health activities for arthritis are fairly new and few states have defined the burden of arthritis in their populations, monitoring the burden of arthritis to more effectively target programs is an important part of these efforts.

CDC collaborates with the Arthritis Foundation to increase awareness of arthritis and its impact, and provide information to the public about appropriate management of arthritis. In addition to state health departments and the Arthritis Foundation, CDC works with the Association of State and Territorial Directors for Health Promotion and Public Health Education, and the Association of State and Territorial Chronic Disease Program Directors.

Performance Summary

In FY 2000, twenty-nine[1] states were funded at an Establishment Level ($60,000) to further develop the basic public health components (i.e., staff, partnerships with others interested in arthritis, monitoring the burden of arthritis, and developing a plan for future activities) to begin to address arthritis. Eight states were funded at a Core Level (average award $300,000) to enhance monitoring activities and partnerships, educate the public about arthritis, and develop and implement pilot programs to decrease the impact of arthritis in select populations. No states are funded at a comprehensive level. Comprehensive programs would implement arthritis activities statewide. In FY 2000, 34 states initiated or enhanced their public health activities to address arthritis using the BRFSS. Ninety-two percent (34 of 37) of CDC-funded state arthritis programs enhanced surveillance of arthritis using the BRFSS. Only 43% of funded states (N=16) had the resources to monitor health related quality of life using BRFSS.

[1]Although initially funded, Maine will not implement arthritis activities.

2.2.2c Goal-by-Goal Presentation of Performance

Performance Goals: Reduce the onset and consequences of arthritis by expanding preventive services and community programs. Reduce the prevalence of chronic and disabling conditions and improve the quality of life for those already affected by these conditions by building nationwide programs in chronic disease prevention and health promotion, and intervening in selected diseases and risk factors.

Performance Measure	Target	Actual Performance	Ref.
Enhance state-based arthritis surveillance using the Behavioral Risk Factor Surveillance System (BRFSS) modules on arthritis and quality of life.	**States with Modules:** **FY 02:** 28 states. **FY 01:** 35 states.	**States with Modules:** **FY 02:** 1/2002. **FY 01:** 50 arthritis; 12 Quality of Life. **FY 00:** 34 arthritis; 16 Quality of Life. **FY 99**: 8 states.	Page 123
Increase the number of states addressing arthritis, at a core level, with CDC support.	**Number of States:** **FY 02:** 8 states. **FY 01:** 8 states.	**Number of States:** **FY 02:** 10/2002. **FY 01:** 8 states. **FY 00:** 8 states.	Page 123

Validation/Verification of Performance Measures: Data on the number of states addressing arthritis can be confirmed by annual reports from grantees and site visits. CDC has an inventory of the questions that are asked on the BRFSS.

2.2.1d Tobacco

Though 7 of every 10 deaths among Americans are due to chronic disease, the actual underlying causes of these deaths are often risk factors that could have been prevented. A relative few modifiable risk behaviors bring inordinate suffering and early death to millions of Americans. Three such behaviors - tobacco use, poor nutrition, and lack of physical activity - are major contributors to our nation's leading killers.

Tobacco Use
Tobacco use is the leading preventable cause of disability and death, killing more than 400,000 Americans each year at an annual cost of $50 billion in direct medical costs. Every day 3,000 young people become regular smokers and it is anticipated that of today's children, 5 million will die prematurely if current smoking trends continue. Data from evidence based analyses of excise-funded state tobacco control programs in the U.S. demonstrate the need for comprehensive, broad-based approaches to tobacco prevention and control. Further, the consequences of tobacco use have become an issue of global concern far beyond the confines of national boundaries. The global tobacco epidemic will become the leading cause of preventable and premature death worldwide. According to the World Health Organization, more than 4 million people in the world die each year from tobacco related diseases. Without effective, comprehensive tobacco prevention and control efforts, by the year 2030, this death toll will increase to as many as 10 million people each year, with 7 million of these deaths occurring in the developing world.

CDC serves as the focal point for DHHS' smoking and health prevention activities. CDC is committed to reducing tobacco use in the population with an ultimate goal of reducing the burden of tobacco-attributable disease. Comprehensive state programs, including school based programs and local outreach efforts, have been shown to be effective in reducing the prevalence of tobacco use.

Presently, almost all of CDC's current tobacco initiative budget is directed towards states. In 2000, CDC significantly increased financial and technical support to all 50 states, territories, and tribes. As a result of the recent state settlement agreement with the tobacco industry, states now have additional resources available to devote to tobacco control. As of July 31, 2000, 36 of the 46 states will spend some portion of their settlement dollars on tobacco control and prevention. Of the 36 states, 34 have set specific spending levels for FY 2001, ranging from $0.5 to $35 million. For FY 2001, the total amount allocated by the 34 states that have made specific spending allocations (~$375 million) is more than four times the total amount allocated($85 million) by the initial four settlement states (Florida, Mississippi, Texas, and Minnesota). In addition, another $35 million in grant funds are also available to most states through the American Legacy to support tobacco programs for youth. FY 2001 funds will be used to sustain CDC's level of funding, as well as to enhance technical assistance to states by advancing the science behind comprehensive tobacco use prevention and control programs. While CDC intends to keep a predominant focus on domestic programs, a proportion of its tobacco initiative for FY 2001 will be for global tobacco control.

It is important to note that reduction of tobacco use is a shared effort. Multiple agencies in DHHS address tobacco use, including CDC; the National Institutes of Health (NIH) that conducts biomedical and applied research, as well as surveillance activities and public health interventions; and the Substance Abuse and Mental Health Services Administration (SAMHSA) that performs tobacco use surveillance and implements regulations on minors' access to tobacco. Other federal departments also play an important role in tobacco policy, including the Federal Trade Commission (FTC) that oversees the testing protocol for tar and nicotine yields in cigarettes and monitors and regulates advertising practices; the Department of Agriculture that works with tobacco farming communities; the Department of Commerce that is involved with the manufacturing sector and other related businesses; the Treasury Department that is involved in customs-related issues and taxation issues; and the Environmental Protection Agency that is involved in second hand smoke issues. In addition, state and local governments, non-governmental organizations, (e.g., American Cancer Society, the Robert Wood Johnson Foundation), and health care providers all play an important role in efforts to reduce tobacco use. Therefore, our accomplishments in the area of tobacco control will be collective, resulting from partnerships between government and non-government entities. In addition, it is important to note that environmental factors can counteract efforts to reduce tobacco use. Such factors include tobacco advertising, industry pricing patterns, and glamorization of tobacco use in the popular media.

Partnerships and Link to DHHS Plan: These performance objectives are related to DHHS goal 1, Reduce major threats to health and productivity of all Americans, especially Objective 1.1: Reduce tobacco use, especially among youth. CDC plans to reduce teen smoking among youth through intervention programs, community-based programs, health communication campaigns, and collaborative partnerships with schools and state programs.

Performance Summary

Between 1991 and 1997, cigarette use among youth (grades 9-12) increased from 27.5 percent to 36.4 percent. The rate of increase in youth smoking slowed between 1995 and 1997 and experts predict that the slowing will continue. This prediction is based on findings from other surveys, which indicate that smoking among adolescents has remained unchanged or declined somewhat in 1998 and 1999. CDC expected the rate of increase to plateau at 36.4 in 1999 and begin to drop after 1999. However, data released from CDC's Youth Risk Behavior Survey in June, 2000 indicate the percentage of teenagers (grades 9-12) who smoke dropped from 36.4% in 1997 to 34.8 % in 1999. Thus, CDC has already surpassed its teen smoking goal for FY 2001. Success in reducing the teen smoking rate is attributed to a number of factors, including current restrictions on the tobacco industry, increased funding at the state level for tobacco control programs, technical assistance from the Federal government to determine effective tobacco control strategies, and coordination of tobacco control efforts among public agencies and non-governmental organizations.

CDC has revised its future teen smoking prevalence projections based on the actual reduction in rates and knowledge of increased industry spending on advertising (in 1996 and 1997, spending by the tobacco industry increased from $5.11 billion to $5.66 billion, i.e., a 10.8 percent increase). The

continued success of tobacco control activities will be determined by monitoring cigarette use among youth.

2.2.2d Goal-by-Goal Presentation of Performance

Performance Goal: Reduce morbidity and mortality attributable to behavioral risk factors by building nationwide programs in chronic disease prevention and health promotion and intervening in selected risk factors.

Performance Measure	Target	Actual Performance	Ref.
Reduce the percentage of teenagers (in grades 9-12) who smoke by conducting an educational campaign, providing funding and technical assistance to state programs, and working with non-governmental entities.	**Percent Teens who Smoke:** **FY 03:** 32.3 percent. **FY 01:** 34.2 percent.* **FY 99:** 36.4 percent. * In June 2000, CDC's YRBSS data was released and the data indicates that CDC has already achieved its FY 01 target. As a result, CDC revised its teen smoking projections.	**Percent Teens who Smoke:** **FY 03:** 7/2003. **FY 01:** 7/2001. **FY 99:** 34.8 percent. **FY 97:** 36.4 percent. **FY 95**: 34.8 percent. **FY 93:** 30.5 percent. **FY 91:** 27.5 percent.	Page 123

Verification/Validation of Performance Measures: CDC will monitor cigarette use among youth and report performance on a biennial basis (in 1999, 2001, 2003, etc.). This allows the use of a single data source, the Youth Risk Behavior Survey (YRBS), which is a component of the YRBSS (see Appendix A.2). The rationale is consistent with Healthy People 2010 and increases validity and the ability to interpret data. The YRBS is conducted on a biennial basis by the Centers for Disease Control and Prevention. Two additional surveys, the National Household Survey on Drug Abuse (NHSDA) and the Monitoring The Future (MTF) Survey, provide complementary data for examining trends and better understanding of youth-related tobacco issues. The NHSDA is conducted annually by the Substance Abuse and Mental Health Services Administration. The MTF is conducted annually by the University of Michigan's Institute for Social Research.

2.2.1.e Health Promotion

Prevention Research Centers

CDC's Health Promotion and Disease Prevention Research Centers (PRC) Program integrates the resources of 24 academic centers nationwide to engage in prevention research for the benefit of the public good. This national network develops and implements community-based prevention research interventions aimed at remediating the primary causes of death and disability throughout the nation. Expertise from university-based prevention research centers is made available to constituencies including health agencies, community-based organizations, and national nonprofit organizations. The link between university research and grassroots organizations helps promote the application of research findings resulting in practical, cost-effective and innovative programs. CDC's PRC Program is also conducting the community prevention component of NIH's multi-year Women's Health Initiative--one of the largest US studies of women's health. Seven of the 24 prevention centers are creating models for preventing heart disease, diabetes, and the consequences of osteoporosis; detecting breast and cervical cancer; and evaluating hormone replacement therapy, dietary and vitamin supplements among women.

Teen Pregnancy Prevention

CDC's support for innovative community demonstration projects in 13 communities is helping to mobilize and organize community leaders and resources to both demonstrate and evaluate the

effectiveness of comprehensive teen pregnancy prevention programs. These projects involve a public health research approach to develop, implement and test best practices using scientific methods. CDC provides state-based surveillance of teen pregnancy rates. Five of the 13 communities are also engaged in conducting enhanced outcome evaluation activities of their community efforts. Four of the 13 communities received supplemental funding to develop innovative service delivery models and to develop behavior changes messages targeting the integration of HIV, STD and pregnancy prevention for youth.

Partnerships and Link to DHHS Plan: The PRCs work through established partnerships among state and local health departments, community-based organizations, and other stakeholders to conduct research around a particular theme. For example, CDC is working with NIH's Office of Extramural Research by conducting the community prevention portion of NIH's multi-year Women's Health Initiative. This performance objective is related to DHHS: Goal 6: Strengthen the nation's health sciences research enterprise and enhance its productivity.

Performance Summary

The FY 00 target of every PRC conducting research projects that involve community-based, participatory research has been realized. Based on a review of the PRC's demonstration projects and Core continuation applications, CDC believes that each PRC will continue to conduct research projects that reflect the needs of their communities.

In FY 2000, in 9 of the 13 teen pregnancy prevention demonstration programs, the hub organization and it's coalition partners have collaborated on implementing (three or more) intervention programs to prevent teen pregnancies in response to specific needs identified through community needs assessments in at least two neighborhoods. Unfortunately, the actual performance measure was not reached due to several of the sites experiencing turnover in project directors, coalition leaders and hub agency senior staff. In an effort to meet future goals, CDC staff will be providing intensive technical assistance to the grantees who did not meet the performance measure, through telephone and e-mail consultation, and site visits. Program staff will continue to evaluate their progress towards meeting the performance goal during the remainder of the fiscal year, and will provide tailored technical assistance as needed.

Examples of teen pregnancy prevention programs:

One of the implemented programs of the **Chicago** program, Communities Reducing Adolescent Pregnancies, is the Plain Talk program. Plain Talk is a community-based initiative designed to assist neighborhood groups and residents in creating and implementing locally acceptable and effective strategies to protect sexually active youth from pregnancy. Plain Talk aims to impact individual, neighborhood and community behavior. It is a process that focuses on helping adults develop the skills and tools they need to communicate effectively with the young people of their community to reduce adolescent sexual risk-taking. West Side Future, a division of the YMCA, was selected as the partner community agency to implement the Plain Talk program. Currently, in it's second year of funding through the Annie E. Casey Foundation, Plain Talk is reaching adults and youth specifically within the targeted community of the Near West Side.

The Wise Guys is a male responsibility curriculum designed to prevent adolescent pregnancy by teaching young males self-responsibility in several areas, primarily in the area of sexual development. An RFP will be distributed throughout the targeted communities of West Town, Near West Side and Humboldt Park for agencies and churches to receive funding through the Communities R.A.P. initiative to pilot the program. A site will be funded in each of the three communities. Further technical assistance will be provided for evaluation, resource development and financial sustainability.

In Central Oklahoma City, one of the interventions being implemented is Postponing Sexual Involvement (PSI). The Postponing Sexual Involvement Program for Young Teens focuses on two central city middle schools, Jackson and Roosevelt, located in high poverty neighborhoods. Students are provided with information on peer pressure and media messages. The classroom discussion is led by trained high school peer educators from S.E. and Grant High Schools. The PSI program gives the students

opportunities to practice refusal skills designed to delay the onset of sexual activity. The organizations involved are the Oklahoma Institute for Child Advocacy Teen Pregnancy Prevention Project, Oklahoma City Public Schools, the Oklahoma State Department of Health, Division of Adolescent Health, and the Junior League of Oklahoma City.

In **Orlando**, TAPP (Teen Age Pregnancy Prevention) initiated a Teen Reading Club, based on the FCAT scores obtained from Orange County Public Schools. Almost every middle school located in the target area zip codes was below the state average in reading. The coalition felt that by creating a reading club teens would ultimately increase their reading level and at the same time learn resistance skills to sex, drugs and alcohol and also participate in community service activities.

Along with the City of Orlando Recreation Supervisor, TAPP has also planned monthly Ready and Prepared (R.A.P.) sessions for teens. Each session was facilitated by trained and skilled individuals who shared information on topics such as Violence, Peer Pressure, and resistance of Drugs and Alcohol. A total of 60 teens have attended these sessions. After each session the teens were given surveys to complete. Food was served at the end of each session with donations provided by the City of Orlando and Winn-Dixie.

2.2.2.e Goal-by-Goal Presentation of Performance

Performance Goal: Increase collaboration efforts focusing on innovative intervention methods that provide results to state, local and community-based organizations through CDC's Prevention Research Centers Program and prevention research demonstration projects.

Performance Measure	Target	Actual Performance	Ref.
The University-based Prevention Research Centers will have at least one Prevention Research Center (PRC) in each DHHS region establishing research priorities and developing research interventions in collaboration with a constituent community.	**Each PRC will undertake:** **FY 02:** At least one research project that reflects community-based participatory research. **FY 01:** At least one research project that reflects community-based participatory research. **FY 00:** At least one research project that reflects community-based participatory research. **FY 99:** 1 PRC in each DHHS region.	**Each PRC will undertake:** **FY 02:** 6/2003. **FY 01:** 6/2002. **FY 00:** 6/2001. **FY 99:** At least 1 PRC has been established in each DHHS Region. **FY 98 :** 0 PRC in each DHHS Region.	Page 123
Performance Measure	**Target**	**Actual Performance**	**Ref.**

The University-based Prevention Research Centers will work toward closing the gap between research findings and public health practices.	**FY 02:** Each of the 24 PRCs will conduct at least one research project aimed at closing the gap between research findings and public health policy and practices. **FY 01:** Each of the 24 PRCs will conduct at least one research project aimed at closing the gap between research findings and public health policy and practices.	**FY 02:** 6/2003. **FY 01:** 6/2002. **FY 00**: 6/2001.	Page 123
In all 13 community demonstration programs, the hub organization and at least five coalition partner organizations will collaboratively have begun implementing three or more intervention programs to prevent teen pregnancies in response to specific needs identified through a community assessment in at least two neighborhoods.	**Programs Meeting Criteria:** **FY 02:** All 13 community demonstration programs. **FY 01:** All 13 community demonstration programs. **FY 00:** All 13 community demonstration programs. **FY 99:** 7 of the 13 community demonstration programs.	**Programs Meeting Criteria:** **FY 02:** 7/2002. **FY 01:** 7/2001. **FY 00:** Nine of 13 demonstration programs. **FY 99:** Seven of 13 demonstration programs. **FY 98:** Only 1 of the 13 demonstration programs.	Page 123

Verification/Validation of Performance Measures: Data for these measures will be available from grantee progress reports, and will be verified through site visits and publications.

A set of cross-site indicators are used for all 13 community teen pregnancy prevention demonstration projects. The evaluation team from each community collects data for these indicators and submits them as part of semiannual reports submitted to CDC. In addition, CDC Program Consultants validate information received through site visits and telephone consultations. No data lags are expected.

2.2.1.f Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is the foundation upon which many successful State and health agency programs are built and is becoming recognized throughout the health care and disease prevention communities as an important and powerful tool in the development, implementation, and evaluation of health care programs. BRFSS is the data tracking source for Federal and State programs and supports CDC-wide disease prevention efforts, defines disease burden, identifies high risk populations, assists decision making and the allocation of scarce resources, and evaluates disease prevention efforts at the national, State, and local levels.

As State and local agency participation is critical to the achievement of national health goals, BRFSS was created to fill the need for State-specific data. BRFSS grew from an initial point-in-time state survey by 29 states between 1981-1983 to an established data collection program of 15 States in 1984. By 1994, all 50 States, the District of Columbia, and three territories (Guam, Virgin Islands, and Puerto Rico) were participating in the BRFSS. Health risk and demographic (age, race, sex, etc.) data is collected monthly at the State and local levels and BRFSS is the largest telephone health survey in the world. BRFSS is the only source for health risk data at the State and local levels.

BRFSS data is collected on a wide range of health risk areas, to include such areas as health care access, asthma, diabetes, exercise, tobacco use, weight control, women's health, sexual behavior, oral health, hypertension, cholesterol awareness, colorectal cancer, immunizations, alcohol consumption, cardiovascular disease, arthritis, skin cancer, etc. There are variations in need from State to State, and BRFSS helps target efforts to the areas of greatest need.

The greatest and most beneficial impact of the analysis and use of the data in program decisions, targeting resources, and program evaluation is at the State and local levels. The primary purpose of BRFSS is to monitor State-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality. Such data is especially useful for planning, initiating, supporting, and evaluating health promotion and disease prevention programs. Data are available through a number of national surveys, but, generally, data are not available on a State-specific basis. The lack of State-specific data can be viewed as a critical deficiency, since State health agencies have the primary role of targeting resources to reduce behavioral risks and their consequent illnesses, and national data may not be appropriate for a given State.

BRFSS data is used to conduct trend analysis, make comparisons among States and Regions; and in some cases, BRFSS data can be used to make national estimates. States use data to make program decisions, target resources, monitor and evaluate program performance and to educate the public and make public officials aware of health risks and disease prevalence. The following are a few specific examples:

1. Alabama used BRFSS data to support legislation restricting indoor smoking and mandating seatbelt use.
2. Alaska assessed the health risks of special populations such as Alaska Natives and American Indians.
3. Arkansas used data from a diabetes control program and flu shots to support a "Life Preserver Flu Campaign."
4. California monitored progress towards Health People 2000 Objectives.
5. Connecticut identified population and age groups at increased cancer risk based on their behaviors.
6. District of Columbia used data to support project "WISH" (Women Into Staying Healthy), a breast and cervical cancer prevention program.
7. Illinois used BRFSS data in a successful application to the Robert Wood Johnson Foundation for funding to the Public Health Futures Illinois, a public, private, and voluntary partnership.
8. Maryland used data to determine priorities for Healthy Maryland 2010.
9. Michigan used data to develop, implement, and evaluate statewide programs to reduce the risk of cardiovascular disease, and
10. Mississippi provided BRFSS information in the development of the State Health Plan used by the Legislative Budget Office.

Over sixty percent of States use BRFSS data to set State health objectives, prepare health planning documents, and plan health programs such as tobacco control, health promotion, and a broad array of disease prevention activities. Nearly two-thirds of States use BRFSS data to support health-related legislative efforts, for example automobile safety belt and tobacco-related legislation. Although BRFSS has always been designed to produce State-level estimates, data has been used in research studies and combined across States, for example, to estimate the extent of alcohol and tobacco use among pregnant women.

Partnerships and Link to DHHS Plan:

The DHHS Strategic Plan, Objective 5.1 states, "Improve the capacity of the public health systems to identify and respond to threats to the health of the nation's population." Data collected through the Statewide BRFSS can be used to identify trends over time, to discover disease patterns among various populations, and to demonstrated whether prevention measures are effective. BRFSS tracks six of the

ten Leading Health Indicators identified in Healthy People 2010 and is cited on page 55, Volume I and II, as a Major Data Source for Healthy People 2010.

Performance Summary

Without adequate sample size it becomes increasingly difficult to provide meaningful estimates regarding health issues. A sample size of 4000 completed interviews per State per year will provide the sample necessary to more accurately measure progress towards State goals, 2010 Health Objectives; and to adequately monitor prevalence among certain population groups in terms of race, ethnicity, and age. The larger sample size will permit better identification of those geographic and demographic variations in health risk behaviors that can be used to by public health care programs to better target appropriate geographic and demographic groups. At present, the sample size between States ranges from approximately 1,700 to approximately 7,500. Eighteen states had a sample size of 4,000 completed interviews or more in
FY 2000. It is projected that 18 States will achieve 4,000 in between FY 2001 and FY 2002.

2.2.2f Goal-by-Goal Presentation of Performance

Performance Goal: Monitor State-level prevalence of the major behavioral risks among adults associated with premature morbidity and mortality in order to improve planning, implementation, and evaluation of health promotion and disease prevention programs.

Performance Measure	Target	Actual Performance	Ref.
Increase the number of states participating in the Behavioral Risk Factor Surveillance System (BRFSS) that complete 4,000 telephone interviews per year.	**States Participating in BRFSS:** **FY 02**: 18. **FY 01:** 18.	**States Participating in BRFSS:** **FY 02:** 4/2003. **FY 01:** 4/2002. **FY 00**: 18. **FY 99**: 9.	Page 123

Verification/Validation of Performance Measures: Data for this measure will be available from grantee progress reports.

2.2.1g Cancer Registries

Cancer is the second leading cause of death in the United States. Since 1990, approximately 15 million new cancer cases have been diagnosed–including over 1.2 million new cases since January 2000 alone. Cancer is estimated to cost the nation $180 billion annually in direct and indirect costs. A large portion of cancer is controllable through prevention, early detection, and treatment.

Cancer surveillance is the key to a unified scientific and public health approach to fighting cancer. Cancer surveillance includes ongoing, timely, and systematic collection and analysis of information on cancer deaths, new cancer cases, extent of disease, screening tests, treatment, and survival. Data collected through statewide cancer registries can be used to identify trends over time, to discover cancer patterns among various populations, and to show whether screening and other prevention measures are making a difference. This information is essential to states in directing effective cancer prevention and control efforts.

Despite the critical role registries can play in helping direct cancer prevention efforts, 10 States had no registry in 1990. Although the remaining 40 States had registries operating at some level, many lacked the financial support and the personnel to gather complete, timely, and accurate data on their population or to ensure that the data collected had minimum standards of quality. A number of states also lacked

legal support for their registry's operation, which further hindered their ability to collect important information.

Through the National Program of Cancer Registries (NPCR), CDC funds states and territories to enhance existing cancer registries; plan and implement statewide registries where they do not exist; develop model legislation and regulations for states to enhance viability of registry operations; set standards for completeness, timeliness, and quality; and provide training. The NPCR serves as the foundation of a national, comprehensive prevention strategy; it is a basic tool in surveillance efforts that will provide the needed factual basis for appropriate policy decisions and allocations of scarce resources. Comprehensive, timely, and accurate data about cancer incidence and stage at diagnosis are needed to provide useful feedback for evaluating progress toward cancer control. In FY 2001, CDC will support 45 States, 3 territories, and the District of Columbia for cancer registries.

NPCR-funded central registries complement existing registries, such as the National Cancer Institute's (NCI) Surveillance, Epidemiology, and End Results (SEER) program, which monitors trends in incidence, treatment, survival time, and extent of disease. SEER is an outgrowth of the National Cancer Act of 1971, which included a mandate to collect, analyze, and disseminate data that would aid in the prevention, diagnosis and treatment of cancer. SEER was established to provide continuous coverage in certain U.S. regions. Trends in cancer incidence, mortality and patient survival in the United States, as well as many other studies, are derived from this data bank.

Under the NPCR's authorization, federally supported medical facilities are not required to report cancer cases to state registries. To encourage reporting from these facilities, NPCR has initiated and maintained an ongoing liaison with the Department of Defense (DOD), Department of Veterans Affairs (DVA), and the Indian Health Service (IHS). The DOD wants to assess the completeness, timeliness, and quality of its data for use in research. NPCR has established a memorandum of agreement with the DOD to assist with this analysis and to facilitate collaborative cancer control activities between the agencies. The DVA is currently in the process of initiating a central cancer registry database. While the IHS does not maintain a centralized cancer registry database, it does maintain a centralized medical informatics database. State cancer registries develop and maintain data exchange agreements with individual IHS facilities in their respective states. NPCR will continue to work with the DOD, DVA and IHS to encourage the routine submission of complete, timely, and quality data to state cancer registries.

CDC and its partners also collaborate to develop successful strategies to capture cancer information on patients who are diagnosed and treated outside the hospital setting and to audit case completeness and quality in outpatient settings.

Because NPCR is a new program, many states do not yet collect information on all the cancer cases occurring in the state each year. However, collection of complete information is critical to the program. The outcomes expected for NPCR–the ability to monitor trends in cancer by site of the cancer, age and ethnicity of the patient, geographic region, and treatment outcomes--will not be possible until the central registries contain complete information. Thus, the performance measure proposed is the best available because it is the most critical to the eventual success and usefulness of the program.

States play a critical role in cancer prevention and control, assuring that programs address the highest priorities of people in states and that these efforts are appropriately targeted to the most affected groups, including underserved populations. And yet, states lack dedicated resources to coordinate and collaborate among categorical cancer programs, including integrating cancer registry data into comprehensive cancer control. CDC currently uses appropriations for breast, cervical, prostate, colorectal and skin cancers to support five states and an Indian Health Board to develop comprehensive cancer control programs that integrate the full range of cancer control activities to better maximize resources, improve community-based education and health promotion, share expertise and effectively target at-risk populations. Comprehensive cancer control grants enable states to strengthen a systematic, science-based approach to cancer control. States establish broad-based cancer coalitions, provide epidemiology support, and develop and implement a comprehensive cancer plan. States can integrate multiple disciplines including administration, basic and applied research, evaluation, health education and

communication, program development, public policy, surveillance, and clinical services.

Partnerships and Links to DHHS Strategic Plan
The DHHS Strategic Plan, Objective 5.1 states "Improve the capacity of the public health system to identify and respond to threats to the health of the Nation's populations." Data collected through statewide cancer registries can be used to identify trends over time, to discover cancer patterns among various populations, and to show whether screening and other prevention measures are making a difference. This information is essential to states in directing effective cancer prevention and control efforts.

CDC works closely to coordinate its efforts with other federal agencies, states, and with national organizations, such as the American Cancer Society, the American College of Surgeons, the North American Association of Central Cancer Registries, and the National Cancer Registrars Association in designing, conducting, and analyzing surveillance research related to cancer. These groups have formed a working consortium, the National Coordinating Council for Cancer Surveillance, to provide an opportunity for collaborating on cancer surveillance and registration issues. These organizations encourage and facilitate voluntary reporting of cancer cases from federally supported facilities to state registries. CDC assists states and national organizations in using cancer surveillance data to describe state or national disease burden, evaluate cancer control activities, and identify populations at high risk for certain cancers. Through collaboration with NAACCR, quality assurance activities are provided for the NPCR.

Performance Summary

The 1999 data (cancer cases diagnosed in 1997) indicated that 60% of NPCR-funded states were reporting that their data were at least 95% complete within 24 months of the close of the diagnosis year. Recognizing the complications of reporting systems, and a thorough evaluation of program data necessitated reassessing program goals and objectives. The result is an extension of the time period allowed for states to achieve 95% completeness (from 12 to 24 months) and a corresponding increase in the target levels.

The NPCR Program Standards for the second 5-year project period, as published with Program Announcement, stipulate that data in a state central cancer registry should be 95% complete within 24 months of the close of a diagnosis year.

2.2.2g Goal-by-Goal Presentation of Performance

Performance Goal: Improve the assessment capacity of cancer prevention by enhancing existing cancer registries.

Performance Measure	Targets	Actual Performance	Ref.
Increase the percentage of states funded by CDC's NPCR that have at least 95% of unduplicated, expected malignant cases of reportable cancer occurring in state resident in a diagnosis year reported to the state cancer registry.	**Percent of States in NPCR:** **FY 02:** 60%. **FY 01:** 60%. **FY 00:** 60%. **FY 99:** 30%.	**Percent of States in NPCR:** **FY 02:** June 2003. **FY 01:** June 2002. **FY 00:** June 2001. **FY 99:** 60%. **FY 98:** 29%. **FY 97:** 17%.	Page 123

Verification/Validation of Performance Measures: States participating in the NPCR are expected to collect information on at least 95% of cancer cases diagnosed or treated in their state each year. Cancer cases should be reported to the central registry within 24 months of diagnosis, and funded states are required to incorporate the standards for data quality and format as described by NAACCR. CDC receives an annual administrative summary from each NPCR program, as well as quarterly reports that indicate progress towards reaching goals of completeness, timeliness, and quality of registry data. In addition, NPCR staff complete annual internal evaluations of program progress. State cancer registries do not report raw data to the CDC, and CDC does not aggregate NPCR data at this time.

Currently, NPCR provides support to 49 programs: 36 for enhancement of established central registries and 13 for planning and implementation of registries. Variations in states' capacities (planning or enhancement status) and initial year of funding result in differences across reference years used for calculating registry data completeness. NAACCR has also established a process by which state registries can apply for certification that ensures that member registries are collecting useful and high-quality data. Member registries are evaluated yearly and provided confidential feedback. Data for FY 2000 will be available in June 2001 for reporting.

A new, more reliable baseline for the NPCR performance measure is a result of clarification of data issues.

2.2.1h Breast and Cervical Cancer Prevention

More than one-half million women in this decade will die of breast and cervical cancer. Breast cancer accounts for nearly one-third of all cancers in women, and approximately 12,900 new cases of cervical cancer are diagnosed each year. Almost all deaths from cervical cancer and an estimated 30 percent of deaths from breast cancer in women over age 50 are preventable through widespread use of Papanicolaou (Pap) testing and screening mammography. A combination of annual clinical breast examinations and mammography can reduce breast cancer mortality by more than 30 percent for women age 50-74. Early detection also increases the 5-year survival rate to 91 percent. Early diagnosis of breast and cervical cancer saves money as well as lives. Treatment costs for breast cancer diagnosed at the localized or in situ stage may be as much as 31 percent lower than treatment costs for breast cancer diagnosed in the regional or distant stages (Taplin SH, Barlow W, Urban N, et. al.). Stage, age, comorbidity and direct costs of colon, prostate, and breast cancer care. Journal of the National Cancer Institute 1995; 87: 417 - 26).

CDC's National Breast and Cervical Cancer Early Detection Program (NBCCEDP) provides cancer screening for underserved women, particularly low-income women, older women, and members of

racial/ethnic minorities. This program creates the foundation for an aggressive response to this health problem and ensures the delivery of successful screening services. CDC supports activities at the state and national level in the areas of screening referral and follow-up services, quality assurance, public and provider education, surveillance, collaboration partnership development, development and evaluation.

The ability to implement a nationwide program depends on the involvement of partners in national, state and local governments; health care professions and organizations; social service and advocacy organizations; and academia. Partnerships assist private and public nonprofit organizations to develop, implement, and evaluate national, community-based interventions for cancer prevention and early detection. They also test new methods and replicate already-proven strategies to educate their constituents about the prevention, early detection and control of cancers; increase access to screening among underserved populations; and create new collaborations with state health departments and others to enhance efforts for cancer control in priority populations. CDC funds a strong and effective network of partners that are well positioned in communities at risk and that bring critical knowledge, skills, credibility, and resources to CDC's cancer control efforts among priority populations. Such populations include the uninsured and such minority groups as American Indians, Alaskan Natives, African-Americans, Hispanics, Asian/Pacific Islanders, Lesbians, women with disabilities, and those who live in hard-to-reach communities in urban and rural areas.

CDC collaborates with the National Cancer Institute (NCI) in a variety of areas related to cancer prevention and control. One example of this collaboration is CDC's partnership with NCI's Cancer Information Service to develop demonstration projects to improve breast and cervical cancer early detection among older women through innovative outreach. The goal of this project is to increase and sustain the participation of eligible underserved women, aged 18-64, in the education and screening services offered through the NBCCEDP and to educate women in the program who are diagnosed with breast or cervical cancer about state-of-the-art treatment options. Additionally, a memoranda of agreement between CDC and the Indian Health Service (IHS) provides support for collaborative scientific and training activities. The aim of these agreements is to develop, deliver, and promote chronic disease prevention activities for American Indians and Alaska Natives. CDC has also assisted the Food and Drug Administration (FDA) in conducting quality assurance training programs for mammography.

Both performance measures submitted for the NBCCEDP are outcome measures. Both mammograms and Pap tests are underused by women who are members of racial and ethnic minority groups. Additionally, the NBCCEDP strives to eliminate racial and ethnic disparities in screening for breast and cervical cancers. By its nature, such a screening program requires time to demonstrate the positive effects of annual screening within the target population. Data collection for these measures has been systematized by the NBCCEDP, and state health agencies were involved in the development of these measures.

Partnerships and Links to DHHS Strategic Plan

These performance measures are related to DHHS goal 4: To improve the quality of health care and human services states " Promote the appropriate use of effective health services," and it includes as a measure of success "Rates of increase in age-appropriate mammography screening." Additionally, Strategic Objective 4.2 states "Reduce disparities in the receipt of quality health care services," and a measure of success for this objective is "Disparities in breast and cervical cancer screening and management." Thus, increasing rates of breast and cervical cancer screening, particularly among population groups with poorer screening rates, is a priority stated in the DHHS Strategic Plan and implemented by CDC's National Breast and Cervical Cancer Early Detection Program.

Performance Summary

Through September 1999, more than 2.5 million screening tests were provided by the NBCCEDP. Approximately 50% of the women served through this program belong to racial or ethnic minority groups. Through the use of early detection methodologies, the program has diagnosed over 6,543 breast cancers and cervical cancer was prevented in as many as 31,000 women through the detection and treatment of precancerous lesions. In 1999, excluding breast cancers diagnosed on an initial screen in the NBCCEDP, at least 70% of women aged 40 and older were diagnosed at localized stage. In 1999, excluding invasive cervical cancers diagnosed on an initial screen in the NBCCEDP, the age adjusted rate of invasive cervical cancer in women aged 20 and older was 19 per 100,000 Pap tests provided. Even though CDC has exceeded its goal of "no more than 22 per 100,000 Pap tests provided," CDC does not recommend changing the target at this time. Effective April 2000, the NBCCEDP changed its policy for Pap screening to allow the program to reach a larger proportion of underserved women–the rarely and never screened women. CDC does not know whether the change in policy will impact the program's ability to maintain this successful 19 per 100,000 rate. Due to the reporting cycles of the minimum data elements, data for FY 2000 will be available after April 2001. CDC is also supporting various activities that will improve the quality and effectiveness of the NBCCEDP. For example, CDC is examining: What factors influence rescreening behaviors; What behaviors could contribute to the etiology of breast cancer; survival differences between black and white women who have breast cancer; economic barriers to cancer screening; and follow-up and treatment of precursor conditions of cervical cancer. Hopefully, continued improvement in screening utilization will contribute to one of our Nation's successes in eliminating disparities in cancer death rates among various populations.

2.2.2h Goal-by-Goal Presentation of Performance

Performance Goal:
Increase early detection of breast and cervical cancer by building nationwide programs in breast and cervical cancer prevention.

Performance Measures	Targets	Actual Performance	Ref.
Excluding breast cancers diagnosed on an initial screen in the NBCCEDP, at least 73% of women aged 40 and older will be diagnosed at localized stage.	**Percent diagnosed at local stage:** **FY 02:** 73%. **FY 01:** 73%. **FY 00:** 72%. **FY 99:** 71%.	**Percent diagnosed at local stage:** **FY 02:** 4/2003. **FY 01:** 4/2002. **FY 00:** 4/2001. **FY 99:** 70%. **FY 98:** 70%. **FY 95:** 70%.	Page 123
Excluding invasive cervical cancers diagnosed on an initial screen in the NBCCEDP, the age adjusted rate of invasive cervical cancer in women aged 20 and older is not more that 22 per 100,000 Pap tests provided.	**Rate of Invasive Cervical Cancer:** **FY 02:** 22 per 100,000. **FY 01:** 22 per 100,000. **FY 00:** 22 per 100,000. **FY 99:** 22 per 100,000.	**Rate of Invasive Cervical Cancer:** **FY 02:** 4/2003. **FY 01:** 4/2002. **FY 00:** 4/2001. **FY 99:** 19 per 100,000. **FY 98:** 23 per 100,000. **FY 95:** 26 per 100,000.	Page 123
Total Program Funding (Dollars in thousands)	**FY 2002:** $574,560 (Estimate) **FY 2001:** $749,773 (Final Appropriation) **FY 2000:** $531,016 (Actual) **FY 1999:** 10/2001 (Actual)		

Verification/Validation of Performance Measures: CDC uses the Minimum Data Elements (MDEs) to report the percentage of women aged 40 and older who were diagnosed at localized stage, excluding breast cancers diagnosed on an initial screen in the NBCCEDP. MDEs are electronically submitted (by states, territories, and tribes/tribal organizations) twice a year (January 15 and July 15) to a data management contractor, who analyzes the data and submits a data file to the CDC. These files are made available in April and October of each year. CDC uses the January 15 submission to report performance for this measure. The data provided in the GPRA report include only screening exams through March 31 of the previous year in order to allow adequate time to gather the data and to present a complete program report. States, territories, and tribes/tribal organizations are provided 9½ months after the initial screening date (March 31) to gather diagnostic and treatment information and to prepare the data submission for the data management contractor by January 15. The data management contractor analyzes the data by March and sends the report to CDC. All the date collected and submitted by the states have indicators to assess completeness. Data are also assessed against established clinical standards.

2.3 Environmental Health

2.3.1 Program Description, Context and Summary of Performance

Many of public health's early successes in reducing the spread of infectious diseases were based on environmental interventions. Systems now exist at the local, state, and federal levels to ensure the safety of the nation's water, air, and food. However, the environmental health system responsible for protecting us from these threats has been weakened over time. Outbreaks of *hantavirus* and *cryptosporidium*, concerns about the health effects of *pfiesteria*, and other emerging environmentally-related diseases is increasing our awareness of the cracks in our crumbling environmental health system. Effective environmental health promotion and disease prevention requires the ability to identify and respond to potential hazards as well as a employ a scientific approach that attempts to explain how environmental exposures and genetics contribute to human disease. CDC must continually conduct prevention research to identify, test, and evaluate disease prevention strategies. In FY 2001 and FY 2002, CDC plans to build upon its FY 2000 achievements on each of these facets of environmental health.

Diseases that can result from human exposure to toxic substances include cancer, birth defects, respiratory disease, renal disease, and neurologic disease. A very serious impediment to assessing human risk and preventing death and disease caused by exposure to toxic substances is lack of valid human exposure data. Many scientists estimate that about two-thirds of all cancers result from environmental exposure, but much better data are needed to improve this estimate and determine which exposures cause cancer and other diseases. CDC's environmental health sciences laboratory develops tests of human exposure to toxicants (biomonitoring); combined with epidemiologic studies, these tests provide vital information about how exposures contribute to serious human disease.

In addition to gathering and analyzing human data on environmental exposures and disease, CDC leads efforts to translate scientific data into practical and cost-effective public health actions. Recent outbreaks caused by *Cryptosporidium* in drinking and recreational water, *e. coli* O157:H7 in water and food, and West Nile virus in mosquitos have increased. One of CDC's oldest missions is to help build sustainable public health capacity at state and local levels by assigning CDC staff to health departments, creating guidelines for professional use, and providing education to form a highly trained public health workforce. In FY 2002, CDC aims to build such capacity in environmental health.

2.3.1a Environmental Health Laboratory Sciences

Biomonitoring

To protect public health from death and disease that result from exposure to toxic substances, CDC and other health officials critically need accurate and reliable **human** exposure information. Although such exposure can be estimated, generally it is more accurate to actually measure the levels of toxicants in people's bodies. A recent General Accounting Office (GAO) report notes that routine biomonitoring of human tissue samples representative of the U.S. population occurs for only 6% of 1,400 known or potentially toxic chemicals. Health officials cannot determine the seriousness of environmental incidents without accurate and valid human exposure information. The GAO report notes that 90% of state officials surveyed consider human exposure data from tissue samples (e.g., blood and urine samples) to be very important or extremely important to their work and believe there is a need for increased state laboratory capacity. With poor exposure information, health officials might declare dangerous situations as safe, threatening the health of the public; similarly, they might declare safe situations as dangerous, causing undue alarm and wasting large sums of money on needless remediation efforts.

Although the performance measures selected for this program are not outcome measures in terms of being a final health outcome, they are important outcomes in terms of addressing a major public health gap. The current limited ability to effectively measure toxic substances in humans limits our ability to deal effectively with environmental emergencies and compromises the results of studies that are looking for causes of environmental diseases. Greater availability of these methods for assessing human exposure would enable CDC to better respond to emergency situations when people are sick or dying from unknown causes, to effectively implement and evaluate environmental disease prevention programs and to measure trends in exposure of the U. S. population to toxic substances. Without these methods, we will be unable to effectively prevent environmental disease. Application of these methods to measure toxic exposures in the U.S. population will lead to the development and dissemination of a national exposure report, which will assess the U.S. population's exposure to toxic substances such as metals, pesticides, and other chemicals. Such information has never before been available for most chemicals. The report will improve the public's health by: providing information on people's level of exposure to toxic substances that may cause cancer, birth defects, respiratory and cardiac diseases, and other diseases; identifying and tracking exposure to toxic substances that are increasing in the population; and tracking the impact of programs designed to reduce exposure to toxic substances. In addition, the report will identify exposure in different demographic groups.

CDC plans to develop new methods to measure additional toxic substances for inclusion in the national exposure report and in studies of potentially exposed populations. CDC's goal is to increase the number of substances included in the report to 100 and then evaluate whether additional substances should be included or substituted for ones already in the report. CDC will work with partners, including other federal agencies, state agencies, and non-government organizations, to prioritize substances for inclusion in the report.

CDC has unique capabilities in the area of biomonitoring. Although EPA measures environmental hazards in air, soil, and water, it does not make such measurements in people. NIEHS conducts research involving animal toxicology but relies on CDC's environmental health lab for human exposure assessments. In addition, several other institutes of NIH (including National Cancer Institute, and National Heart Lung and Blood Institute) use CDC's environmental health laboratory for human measurements. CDC partners with the Association of Public Health Laboratories (APHL) on a variety of projects; however, very few of APHL's member labs currently have capability in the methods employed in CDC's lab. In many areas, CDC is the only place with the capability to develop and effectively apply complex laboratory methods to the study of environmental disease. CDC biomonitoring efforts will be expanded over time to include a greater focus on technology transfer; to achieve this, CDC plans to provide financial and technical assistance to state public health laboratories to help them develop capacity to measure toxic substances in human samples. Such assistance will allow state officials to study toxic substances that are priority concerns in their states and accurately determine if their population has been exposed.

Partnerships and Links to DHHS Strategic Plan

This performance measure is related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and DHHS Goal 5: Improve the Nation's public health systems.

Performance Summary

CDC achieved the FY 1999 target regarding methods to measure human exposure to toxic substances, as well as the FY 2000 target of methods to measure 8 additional substances. CDC anticipates meeting the performance goal of 12 new substances by the end of 2002, for a cumulative total of 40 new substances since FY99. The availability of new methods allows CDC to participate in additional studies of the impacts of exposure on development of disease and allows for additional substances to be included in the National Exposure Report. The first CDC National Exposure Report is planned for release by March 2001; it will include data on the U.S. population's exposure to the 27 toxic or potentially toxic substances measured in FY2000. This will improve the public's health by providing baseline information on the U.S. population's exposure to toxic substances as a point of comparison for communities who may have experienced an unusual exposure.

2.3.2a Goal-by-Goal Presentation of Performance

Performance Goal: Increase the number of toxic substances that can be measured by CDC's environmental health laboratory so state-of-the-art laboratory methods can be employed to prevent avoidable environmental disease.

Performance Measure	Targets	Actual Performance	Ref.
Methods to measure human exposure to toxic substances will be developed.	**FY 02:** 12 new substances **FY 01:** 12 new substances. **FY 00:** 8 new substances. **FY 99:** 8 new substances.	**FY 02:** **FY 01:** **FY 00:** 8 new substances. **FY 99:** 8 new substances. **FY 97:** 200 toxic substances (Baseline).	Page 137

Performance Goal: Increase the number of priority substances included in exposure assessment so that a representative sample of 1,500 Americans can be tested for exposure to high-priority toxic substances.

Performance Measure	Target	Actual Performance	Ref.
Population exposure will be assessed for priority toxic substances and a national exposure report on the results will be issued	**FY 02:** 75 toxic substances; report on the 50 substances from the previous year issued. **FY 01:** 50 toxic substances; report on the 27 substances from the previous year issued. **FY 00:** 25 toxic substances.	**FY 02:** **FY 01:** **FY 00:** 27 substances. **FY 98:** Baseline 0 toxic substances (baseline).	Page 137

Verification/Validation of Performance Measures: The development of new methods requires certification under the Clinical Laboratory Improvements Act of 1988 (CLIA) and data systems already are in place to monitor CDC's performance under CLIA (please see Appendix A.2 for further details). CDC also conducts internal quality assurance procedures to confirm the results and assure their validity. The national exposure report will use CLIA-approved methods for the priority toxic substances to be measured as a part of the NHANES surveys. The use of the CLIA-approved methods will be verified by both internal quality assurance personnel and senior staff. The sample size and control mechanisms for the national exposure report are established as part of NHANES (see Appendix A.2 for further details).

Newborn Screening Quality Assurance

In addition to its critical work in biomonitoring, CDC plays a role in the screening of newborns for inherited disorders such as PKU, hypothyroidism, and sickle cell diseases. If such disorders are detected early, actions can be taken to reduce mental retardation, disability, or death among affected infants. Scientific technology is improving the ability of the public health community to detect medical conditions through newborn screening. More than 4 million babies born each year are tested through screening programs using dried blood spots collected from infants at birth (blood is collected from the infant's heel). Accuracy in such screening ensures that affected babies are identified quickly, that cases are not missed, and that the number of "false positive" results are minimized in order to decrease parental anxiety. In an effort to ensure that these screening efforts meet the highest standards, CDC operates a Newborn Screening Quality Assurance program to assist state public health laboratories that operate the screening. As states include new tests in their newborn screening programs, CDC needs to expand its quality assurance efforts to ensure the accuracy of these tests. CDC is working to incorporate additional medical conditions to this program in response to the states' expanded use of tandem mass spectrometry and other technological advances.

Partnerships and Links to DHHS Strategic Plan

These performance objectives are related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and DHHS Goal 5: Improve public health systems.

Performance Summary

CDC's Newborn Screening Quality Assurance Program has been the only comprehensive source of essential quality improvement services for more than 20 years and is recognized worldwide as the center of expertise in dried blood spot technologies. Each year approximately 3,000 babies with severe disorders are detected, and thousands of children are living healthy and productive lives as a result of newborn screening and CDC's quality assurance program. As technology to detect newborn disorders advances, states are expanding screening programs to include additional disorders. For example, the use of tandem mass spectrometry allows for identification of a number of additional disorders. Therefore, CDC is expanding its quality assurance program to include these additional disorders. CDC's efforts at

expanding newborn screening quality assurance through the use of tandem mass spectrometry will not be fully operational until the end of FY 2002.

Performance Goal: Increase the number of disorders covered in the Newborn Screening Quality Assurance Program.

Performance Measure	Targets	Actual Performance	Ref.
Disorders covered by the Newborn Screening Quality Assurance Program.	**FY 02:** 35 disorders. **FY 01:** 15 disorders.	**FY 02:** **FY 01**: **FY 00:** 15 Disorders (baseline).	Page 137

Verification/Validation of Performance Measure: The new disorders covered by the Newborn Screening Quality Assurance Program will be verified through collaboration with state public health and other laboratories and publication in peer-reviewed journals.

2.3.1b Asthma

The number of Americans with asthma doubled between 1979 and 1994. An estimated 14.9 million persons in the U.S. currently have asthma, and 4.4 million of these people are children. While the cause of asthma remains unknown, it is possible to control asthma attacks in people who have asthma. CDC is working towards the goal of developing cost-effective environmental interventions that, in conjunction with improved medical management, will reduce the number of asthma exacerbations and improve the quality of life of people with asthma. While it is difficult to measure improvements in quality of life, CDC uses three indicators to best estimate quality of life in its strategy to attain this goal: number of missed school days due to asthma, number of days characterized by activity limitation due to asthma, and number of missed work days due to asthma.

In spite of the fact that improved medical management in combination with environmental interventions has proven effective in preventing asthma attacks, CDC did not meet its Healthy People 2000 objectives related to reductions in hospitalizations related to asthma. In fact, the minimal national data (which are neither complete nor timely) that are available indicate that rates of asthma among both children and adults are increasing. Outcome goals are not currently feasible, because there is no suitable system for measurement (since asthma programs do not currently exist). Essentially, there is currently no national program to address the asthma epidemic. The first step in overcoming this barrier is to enable all states and major cities that can document an asthma problem to implement core asthma programs. A core asthma program is composed of three activities: tracking (surveillance), ensuring that interventions are science-based, and developing relevant partnerships within the state (i.e., with medical facilities, schools, etc.). Once states have these capabilities, we can strengthen our efforts to improve the quality of life of people with asthma. As part of the effort to assist states in gaining the capability to document their asthma problems and to appropriately target resources, CDC has: developed an asthma module to be used by a national tracking system for addressing adult asthma; begun development of a module for a national tracking system that focuses on children; and begun to provide funding to states to develop their own asthma tracking capabilities.

Due to the newness of the state programs, the current performance measure is of a more process-based nature. As the state-based programs become fully implemented, the performance goal and measure will be changed to reflect long-term health outcomes and will be guided by the Healthy People 2010 asthma objectives.

Partnerships and Links to DHHS Strategic Plan

This performance objective is related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans.

Performance Summary

In 1998, CDC established asthma contacts in all 50 states to act as the focal point within states as they start to develop their asthma programs. CDC provided these state asthma contacts with critical information covering topics such as epidemiology of asthma, surveillance, interventions, legislation, and medical management of the condition. In 1999, CDC initiated funding to States. CDC planned to fund six states in FY 1999, but there was only adequate funding for four states that year. In FY 2000, CDC provided funding to eight additional states to begin development of their core asthma programs, bringing the total number of states with asthma funds to 12. CDC has recently been asked to fund a more broad category of organizations than just states; therefore, in the out-years, the number of new states receiving funding is not increasing as quickly as originally planned. In addition to the state programs, CDC developed asthma questions for the national Behavioral Risk Factor Surveillance System (BRFSS), which focuses on adults; in FY 2000, we developed an asthma module for the national State and Local Area Integrated Telephone Survey (SLAITS), which focuses on children. These national surveillance systems allow states to obtain uniform data on asthma so they can compare their rates to the other states. Since research is also an important aspect of a core asthma program, CDC is additionally funding a number of universities and hospital emergency departments to conduct research in the areas of asthma screening and sentinel surveillance.

2.3.2b Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence of childhood asthma attacks through implementation of comprehensive asthma prevention programs in states.

Performance Measure	Targets	Actual Performance	Ref.
States will have implemented core asthma programs.	**States with Asthma Programs:** **FY 02:** 18. **FY 01:** 18. **FY 00:** 8. **FY 99:** 6.	**States with Asthma Programs:** **FY 02:** **FY 01:** **FY 00:** 12 states (4 existing and 8 new). **FY 99:** 4. **FY 97:** 0.	Page 137

Verification and Validation of Performance Measure: Verification of the data related to the number of core asthma programs in place is based on the required reporting under the cooperative agreements between CDC and the selected states. CDC project officers will verify that the individual requirements under the cooperative agreements are being fulfilled by the states through the routine monitoring of the grants process. Additionally, all statistical and surveillance data will be reviewed internally by epidemiologists at CDC to ensure that appropriate statistical and epidemiological methods have been applied.

2.3.1c Childhood Lead Poisoning

Lead poisoning is a major environmental health threat to children. The National Academy of Sciences has reported that even relatively low levels of lead exposure - 10 micrograms per deciliter (µg/dl) - are harmful and are associated with decreased intelligence, behavior problems, and other physical problems. During the past two decades, there has been a dramatic reduction of the prevalence of lead poisoning in young children in the U.S. This reduction was due to a number of different strategies, including the removal of lead from gasoline and new house paint and the implementation of prevention programs by CDC, Housing and Urban Development, and the Environmental Protection Agency.

Despite tremendous success, childhood lead poisoning remains a serious problem. Based on CDC's most recent National Health and Nutrition Examination Survey (NHANES) data, an estimated 890,000 young

children still have elevated blood lead levels. Today, the problem is concentrated in racial and ethnic minorities and low-income households. Nearly 22% of non-Hispanic black children living in homes built before 1946 have elevated blood lead levels, compared with less than 2% in non-Hispanic whites living in newer homes. Further, a recent GAO report based on CDC's NHANES shows that only 19% of Medicaid-enrolled children have been screened for lead poisoning.

As a result of these findings, there has been a paradigm shift away from universal screening of all children in the U.S. toward targeted screening of high-risk children. CDC revised its policy recommendations and funding guidelines to emphasize the screening of only high-risk children. In conjunction with CDC, CDC's Advisory Committee on Lead Poisoning Prevention developed a set of soon-to-be-published recommendations on this matter and also is publishing guidance on improving case management. In addition, CDC developed its first Geographic Information System (GIS) website using U.S. census data on income, race, and housing age to identify high-risk geographic areas. CDC also works closely with other federal agencies to emphasize the screening of Medicaid-enrolled children and is expanding technical assistance, consultation, and training to support state and local health officials and their prevention programs. For instance, CDC is working with HCFA through an inter-agency agreement to provide on-site technical assistance and consultation to improve the screening rate of children enrolled in Medicaid.

The goal of CDC's childhood lead poisoning program is to eliminate childhood lead poisoning as a major public health problem in the U.S. within the next decade. This will be accomplished by strengthening primary and secondary prevention efforts in populations that are at highest risk.

Partnerships and Links to DHHS Strategic Plan
This performance objective is related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans.

Performance Summary

Traditionally, NHANES has provided the basis for estimating the prevalence of children with elevated blood lead levels over a 3-year period. However, CDC continues annually to actively support lead poisoning prevention and surveillance efforts in states throughout the country. CDC has a new performance measure to ensure that supported states establish a system that determines the number of children participating in Medicaid who are being screened for elevated blood lead levels. This requires that states engage in an information exchange with HCFA. Working out the mechanics in establishing such a system of information exchange is a cumbersome task for these states. Some states are able to do this more quickly than others, sometimes due to differing starting points. The FY 2000 target for this measure was 15% of CDC-supported states, and actual performance was 12.5%. While CDC offers as much support as possible to these states, it is impossible to predict which ones will experience technical difficulties or delays in establishing their systems with HCFA. Although only 12.5% of CDC-supported states have such a system in place, many states have begun efforts to at least link Medicaid information with childhood lead poisoning surveillance data, paving the way to developing such a system. In FY 2000, 45% (18) of the forty CDC-supported states had begun dialogue with Medicaid staff, and 35% (14) had begun using Medicaid data. Final systems should soon be in place for these states. This information should allow states to better adjust their screening efforts. Based on the trends from these data, CDC believes that its target for FY 2001 will be achieved.

2.3.2c Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the number of children with blood lead levels that exceed 10 micrograms per deciliter, which is the level at which children's health may be damaged.

Performance Measure	Targets	Actual Performance	Ref.
The number of children with elevated blood lead levels will be reduced.	**FY 03:** 35% reduction. **FY 99:** 25% reduction in children with elevated lead levels.	**FY 03:** **FY 99:** No data available in FY 99 NHANES. Next NHANES data will be available FY 03. **FY 91-94**: 890,000 children with blood levels greater than 10 micrograms per deciliter.	Page 137
Increase the percentage of CDC supported states with a system to determine the number of children enrolled in Medicaid who are screened for lead poisoning.	**Percent of CDC supported states:** **FY 02:** 40%. **FY 01:** 25%. **FY 00:** 15%.	**Percent of CDC supported states:** **FY 02:** **FY 01:** **FY 00:** 12.5%. **FY 99:** 0%.	Page 137

Verification/Validation of Performance Measures: The progress reports from states with grants are regularly reviewed by CDC project officers to ensure that the reports accurately reflect the obligations required by the grants. Included in these reviews is an update on the ability of states to determine the number of children enrolled in Medicaid who are screened for lead poisoning.

2.3.1d Genetics and Disease Prevention

CDC's activities in this area integrate discoveries in human genetics into disease prevention strategies as outlined in the CDC strategic plan, "Translating Advances in Human Genetics into Public Health Action." CDC will promote public health genetic knowledge and capacity through: 1) state and community-level health assessment and planning; 2) public health research on gene-environment interactions; 3) evaluation of genetic testing; 4) a national program for implementing effective and ethical disease interventions; and 5) communication and training strategies for providing relevant genetics information to various audiences. These programs will be collaborative efforts among public, academic and private organizations that strengthen crosscutting research, training, laboratories and preventive health programs. By integrating genetics into existing public health programs, CDC and its partners will expand opportunities for increased effectiveness of targeting interventions to individuals with specific genetic variants that, in combination with modifiable risk factors, increase their risk of disease and disability.

Partnerships and Links to DHHS Strategic Plan

This objective is related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and DHHS Goal 5: Improve public health systems.

Performance Summary

CDC is actively engaged in promoting the integration of human genetics into public health prevention activities. CDC's genetics activities in this pursuit can be broken down into two facets: integrating scientific advances in genetics into public health action and developing state public health capacity for such integration. Additionally, CDC has been working collaboratively with other federal agencies to facilitate the integration of genetics into their federal and state activities. CDC has begun assessing DNA-based tests for clinical and public health utility and aims for 3 such tests to be assessed during FY 2001.

CDC will begin providing technical assistance to individual states to begin integrating genetics into there public health activities in FY 2002.

2.3.2d Goal-by-Goal Presentation by Budget

Performance Goal: State health departments will integrate genetic testing into their targeted preventable disease programs (such as asthma, cancer, cardiovascular disease, and arthritis) and related communication programs.

Performance Measure	Target	Actual Performance	Ref.
Number of states receiving technical assistance from CDC in the integration of genetics into public health.	**FY 02:** 7-9 states. **FY 01:** 3-5 states.	**FY 02:** **FY 01:** **FY 00:** 0 states (baseline).	Page 137

Performance Goal: Clinical and public health validity and utility data for specific DNA-based tests will be made available to public health professionals and the public.

Performance Measure	Target	Actual Performance	Ref.
The number of DNA-based tests assessed using a core set of data required to define clinical and public health utility.	**FY 02:** 4 tests. **FY 01:** 3 tests.	**FY 02:** **FY 01:** **FY 00:** 0 tests (baseline).	Page 137

Verification/Validation of Performance Measures: This performance measure will be verified by reviews of the reports required by contract recipients. CDC project officers will regularly review the individual requirements under the agreements to ensure that contractors are in compliance with the agreements.

2.3.1e Core Capacity in Environmental Health

Environmentally-related diseases in the U.S. have a significant impact on the public's health each year. The role of the environment in the development of both infectious and chronic disease is well recognized but not well understood. The outbreak of infectious diseases such as *Hantavirus* and West Nile Virus are directly related to environmental conditions. The environmental role in the development of chronic disease such as cancer has not received the same level of research attention as the genetic role of these diseases, even though environmental exposure may be equally important. Despite the frequency and considerable impact of these and related diseases, little is known about the potential environmental causes of these conditions. In order to protect the public's health from these diseases, their causes must be determined. Studying the human health effects of environmental exposures will aid in this pursuit. Protecting people's health from hazards in their environment that can cause or exacerbate these serious conditions is a task that requires a broad set of tools, all of which must work together seamlessly to be truly effective. These tools include surveillance and data collection to determine which substances in the environment are getting into people and to what degree. Another necessary tool is research to determine what the health effects of these exposures might be, what populations are most at risk, and what interventions are needed to prevent adverse health effects.

Environmental health services is another critical area of environmental health core capacity. The Pew Environmental Health Commission landmark report, "America's Environmental Health Gap," published in late 2000, highlighted America's national inability to adequately respond to environmental health problems. Protecting people from hazards in their environment that have a serious impact on their health and reduce the quality of life is another task that requires a broad set of tools. One of these vital tools is infrastructure at the local, state, and federal levels to ensure rapid and effective delivery of surveillance, analysis, and interventions to all of the potentially impacted people, and to ensure appropriate and rapid response to reduce or eliminate the environmental health impact. Many of the emerging and re-emerging public health issues occurring today require a coordinated and sophisticated environmental health response, dependent on solid infrastructure. Currently, such infrastructure and coordination does not exist at the state and local levels, where it is most important. State and local environmental health programs do not have an adequate workforce (both in number and skills) to prevent or respond to many environmentally-related diseases and emergencies. CDC is currently attempting to correct this gap through the provision of training and other means of workforce development to states.

Partnerships and Links to DHHS Strategic Plan: This objective is related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and to DHHS Goal 5: Improve public health systems.

Performance Summary

CDC is actively engaged in developing a more complete understanding of the role that environmental exposures play in human health . Currently, CDC is providing technical assistance to individual states to address specific environmental health issues on a limited basis, and the new activities related to pesticide exposure or environmental exposures will begin in FY 2002. Regarding its goal of developing core capacity in environmental health services, CDC has begun the process of developing such capacity by providing relevant services to and expanding collaborations with its constituents. CDC plans on assisting 5 states in FY 2001 and increasing the number to 7 for FY 2002.

2.3.2e Goal-by-Goal Presentation by Budget

Performance Goal: Increase understanding of the relationship between environmental exposures and health effects.

Performance Measure	Target	Actual Performance	Ref.
Number of environmental health studies completed.	**FY 02:** 5 studies.	**FY 02:** **FY 01:** 0 studies (baseline).	Page 137

Performance Goal: Through consultation, technical assistance, and training, increase the capacity of states and local health departments to address and carry out environmental health services.

Performance Measure	Target	Actual Performance	Ref
Number of state and local health departments provided consultation and/or technical assistance to address environmental health service issues.	**FY 02:** 5 states. **FY 01:** 5 states.	**FY 02:** **FY 01:** **FY 00:** 0 (Baseline)	Page 137
Total Program Funding (Dollars in Thousands)	**FY 2002:** $ 136,683 (Estimate) **FY 2001:** $ 137,279 (Final Appropriation) **FY 2000:** $ 88,180 (Actual) **FY 1999:** $ 10/2001 (Actual)		

Verification/Validation of Performance Measures: These performance measures will be verified by reviews of the reports required by cooperative agreement recipients. CDC project officers will regularly review the individual requirements under the agreements to ensure that grantees are in compliance with the agreements.

2.4 Epidemic Services and Response

2.4.1 Program Description, Context and Performance Summary

The scope of CDC's epidemic services extends to acute and chronic infectious and noninfectious diseases, injuries, nutrition, reproductive health, environmental health, and occupational problems. When state, local, or foreign health authorities request help in controlling an epidemic or solving other health problems, CDC dispatches skilled epidemiologists from the Epidemic Intelligence Service to investigate and resolve the problem. As part of CDC's efforts to implement the Healthy People 2000/2010 National Prevention Objectives, CDC conducts a program of scientific inquiry and applied research to solve public health problems and supports selected programs to assist states, health organizations, and others in the health field to achieve prevention goals. Resolving public health problems rapidly ensures cost effective health care and enhances health promotion and disease prevention. Activities involving rapid solutions range from local identification of food poisoning to national or even international investigations of deadly diseases, environmental hazards, or natural disasters. CDC efforts will continue to provide the U.S. with a trained professional staff able to investigate health problems affecting the U.S. population. Changing needs in public health require that the public health workforce in states, counties, cities, and other countries be trained to keep abreast of effective techniques for containing health threats.

Epidemic services cover a vast spectrum of activities: preventing and controlling epidemics and protecting the U.S. population from public health crises including biological and chemical emergencies; developing, operating, and maintaining surveillance systems, analyzing data, and responding to public health problems; training public health epidemiologists; developing leadership and management skills of public health officials at the federal, state, and local levels; carrying out the quarantine program as required by regulations; and publishing the *Morbidity and Mortality Weekly Report*, CDC's main channel for communicating public health news about disease outbreaks and trends in health and health behavior.

Partnerships and Links to DHHS Strategic Plan
These performance measures are related to DHHS Goal 1: Reduce the major threats to health and productivity of all Americans and DHHS Goal 5: Improve the Nation's public health systems.

Performance Summary

In FY 2000, the accomplishments of the *Morbidity and Mortality Weekly Report (MMWR)* series of publications through multiple channels included publishing 171 *MMWR* weekly articles, 11 Recommendations and Reports, 12 CDC Surveillance Summaries and 9 articles highlighting key health events such as Alcohol and Other Drug-Related Birth Defects Awareness Week, National Adult Immunization Awareness Wee, National Arthritis Month, National Child Passenger Safety Week, National Diabetes Month, National HIV Testing Day, Great American Smokeout, National Drunk and Drugged Driving Prevention Month, National Minority Cancer Awareness Week. CDC met its target for both the FY 1999 and FY 2000 goals to enhance the scientific quality and public health applicability of the *MMWR* to communicate public health news about disease outbreaks and trends in health and health behavior by publishing 86 issues of the *MMWR.* The *MMWR* series of publications include Reports and Recommendations, Surveillance Summaries, and the Annual Summary to communicate major public health events to the media, public policy makers and health professionals through multiple media channels - print, television, radio, and the interactive World Wide Web. The FY 2000 issues are available on the interactive CDC Internet Site at http://www2.cdc.gov/mmwr. Notable in the FY 2000 publications is the establishment of CDC's 1st on-line Continuing Education Program for Physicians, Nurses and Public Health Practitioners developed in response to the demand for more continuing education for public health practitioners. The *MMWR* continuing education program (CEP) for physicians, nurses, and other public health practitioners provides electronic and paper text and testing delivered simultaneously with the electronic and paper editions of the *MMWR*. The on-line user is able to compare answers to correct answers, print an award certificate and a transcript on a local printer after each test. Users may also mail or fax answers to the *MMWR* CEP and receive a certificate of completion and transcript through the mail. The *MMWR* CEP provides an incentive for health professionals who may not otherwise read information from CDC. In fiscal year 2000, the *MMWR* CEP provided 15 examinations based on CDC public health recommendations and was used by over 31,000 participants. Since its inception, the CEP program has awarded over 55,000 continuing education credits to more than 37,000 participants in the United States and 49 foreign countries. The majority of participants were physicians (65%) who earned CME credits making the *MMWR* CEP and largest CME provider at CDC; nurses (24%) and others (11%) comprised the remaining participants. Most physicians (60%) were in clinical practice while the majority of nurses practiced in public health (43%) or hospital (32%) settings. The *MMWR* CEP uses state-of-the-art on-line and paper-based communications technology. The impact is dramatic with 72% of all participants reporting that the continuing education program content will affect their clinical and public health practice. In FY 2001, efforts continue to implement the CDC-wide communications plan to enhance health communications as a vital component of public health strategies in promoting health and preventing disease and injury.

In FY 1999, CDC continued to recognize the need of state health departments to develop public health comprehensive information networks to support all essential public health services. CDC approached this challenge systematically by assisting state health departments in developing plans for comprehensive networks and in implementing those networks. In FY 1999, this initiative expanded to address the need of major metropolitan areas for health-sector dedicated communication systems to support detection and response to terrorist events. (See Section 2.12, "Public Health Response to Terrorism, ").

In FY 2000, the Epidemic Intelligence Service (EIS) Program coordinated 74 Epidemic Assistance Investigations (Epi-Aids), and over 300 state-based field investigations. Epidemics are prevented and controlled by mobilizing and deploying CDC staff, primarily Epidemic Intelligence Service (EIS) officers, to respond rapidly to disease outbreaks and disaster situations. At the request of public health officials-at the state, national, or international level-CDC provides assistance by participating in epidemiologic field investigations. During these investigations, CDC staff act as consultants to a state or local health department or the health ministry of the host nation, investigating the patterns of disease or injury occurrence, the levels of risk behaviors, the identity of the causative agent, the transmission of the condition of concern, and the impact of preventive interventions. Each year, some requests for assistance are received which do not meet the established criteria or definition of a disease outbreak. Each request is reviewed, and once it is established that the request complies with the criteria, EIS Officers are deployed to aid in the investigation or disaster relief. In FY 1999 and 2000, CDC exceeded its target of responding to "at least 95%" of the requests for epidemic assistance from domestic and

international partners by responding to 99% of the requests. The requests for which CDC did not respond (1%) were international requests and could not be conducted due to the inability to get country clearance, the lack of funding from international organizations or safety issues. During investigations, CDC staff provide training to public health staff on-site resulting in the ability of state and local staff to manage outbreak investigations without direct CDC assistance. In this event, technical assistance is provided by CDC in resolving outbreaks at the local level. In FY 2001 and beyond, CDC will continue to conduct activities involving rapid solutions to problems such as local identification of food poisoning to national or even international investigations of deadly diseases, bioterrorism events, environmental hazards, or natural disasters. To accomplish this, CDC will maintain well trained professionals able to investigate health problems affecting the U.S. population and to achieve prevention goals.

CDC was successful in meeting the established target for completing the second phase of the evaluation of the Epidemic Intelligence Service. Results of the first phase are being implemented resulting in an enhanced capability of developing programs which provide up-to-date knowledge and skills using distance-based learning technologies preparing EIS Officers to be better able to respond to disease outbreaks, acts of bioterrorism, natural disasters, and other major health hazards. The Epidemiology Program Office does not work directly with laboratories.

An expanding mission, new programs, and new partners in public health underscore the need for a public health work force able to apply a broad range of disciplines and strategies to develop effective prevention programs that improve and promote health. As a result, the Public Health Prevention Service (PHPS) program was established as a 3-year program of training and service to develop a work force skilled in applying pertinent research related to epidemiology, social and behavioral science, and other public health sciences. The PHPS programs aids the development, implementation and evaluation of prevention strategies that are practical and effective at community, state, and national levels. The first class of Prevention Specialists began in September 1997. The PHPS program is designed to provide two different assignments at CDC in the first year of the program. In the second and third years, Prevention Specialists work in a state or local health department, where they lead direct, hands-on work with communities and local public health issues. The combination of federal, state, and local experiences, augmented by formal and informal instruction, provides a wide range of program activities to develop broad public health skills. Currently, there are 75 Prevention Specialists in the PHPS program. Fifty are in state and local health departments and 25 are in assignments at CDC. The first class of Prevention Specialists completed the PHPS Program early in September 2000. Prevention Specialists are involved in a breadth of public health issues during their assignments. In all settings, Prevention Specialists infuse programs with their interest and skill in public health and with their ability to apply sound public health principles. At the same time, they are developing additional skills needed to be part of a well-trained public health workforce. The PHPS program adds to the pool of state and local public health workers who, through formal training and supervised on-the-job training, are skilled and understand the mission of public health. In FY 2000, CDC was unable to meet the target of “90% of the first class of the Public Health Prevention Service will remain in public health and 50% will be working in state/local health departments”. The breakdown of the first PHPS class is as follows: Of the 25 participants selected for the first class, 19 (76%) completed the PHPS program. Of the six participants not completing the course work, a breakdown of current positions follows: American Cancer Society in the New York Tobacco Control Program (1); Harris County HIV Program Coordinator (1); Executive Director of the State and Territorial Injury Prevention Director’s Association (1); private consultant for public health (1); stay-at-home mom (1); and a Community Health Coordinator for UCLA (1). Of the 19 PHPS completing the program; 17 (89%) are serving in a public health setting; 4 in a state or local health department; 10 at CDC in various programs, 2 private consultants in public health, and 1 seeking an advanced degree in a health field. The remaining 2 are in various fields not directly associated with public health. In FY 2000, the program has 50 field assignees in 29 States and local jurisdictions. The target goals for FY 2001 and 2002 remain unchanged. Based on the evaluation of the first PHPS class, the program has been revised and targeted to supplying a skilled workforce at all levels of public health.

In FY 1999, CDC continually sought to improve health but to do so in economically responsible ways. When human and financial resources are limited, public health efforts must focus on prevention strategies that yield the most benefit for the investment. The prevention effectiveness fellowship and course

demonstrates how spending money to prevent disease and injury and promote healthy lifestyles makes good economic sense. Prevention strategies are evaluated on: 1) the health impact of the related disease, injury, or disability on U.S. society; 2) the effectiveness of the prevention strategy; the costs of the disease, injury, or disability; and 3) the cost-effectiveness of the strategy. For instance, some childhood vaccines, save up to $29 in direct medical costs for each dollar spent. Other strategies, such as yearly mammograms, carry a net cost but are considered cost-effective because they provide considerable value in return for the money invested. CDC met its established target for FY 1999 and in FY 2000 in building expertise to conduct prevention effectiveness studies of public health interventions and will continue in FY 2001 to determine what prevention strategies work and what it costs to implement them.

In FY 1999, CDC recognized the need of state and local public health professionals for high quality training. CDC approached this problem through a systematic needs assessment and development of programs to provide up-to-date knowledge and skills using distance-based learning technologies. CDC exceeded its FY 1999 distance learning target by expanding the range of programs offered. Examples include training in public health response to bioterrorism, childhood immunization schedules, epidemiology and prevention of vaccine-preventable diseases, and preparing for an influenza pandemic.

2.4.1 Goal-by-Goal Presentation of Performance

Performance Goal: Maximize the distribution and use of scientific information and prevention messages through modern communication technology.

Performance Measures	Targets	Actual Performance	Ref.
Based on established criteria continue to publish the Morbidity and Mortality Weekly Reports (MMWR) series of publications including Reports and Recommendations, Surveillance Summaries, and the Annual Summary to communicate major public health events to the media, public policy makers and health professionals through multiple media channels -- print, television, radio, interactive World Wide Web.	**MMWR Issues Published:** **FY 02:** 86. **FY 01**: 86. **FY 00:** 81. **FY 99:** 77.	**MMWR Issues Published:** **FY 02:** **FY 01:** **FY 00**: 81 issues. **FY 99:** 77 issues published and available on the CDC Internet site at http://www2.cdc.gov/mmwr/.	Page

Performance Measures	Targets	Actual Performance	Ref.
The MMWR will refine communication efforts through a Center-wide communications plan to provide a framework for current activities and maximize communicating public health messages through print and the World Wide Web.	**FY 02:** Prepare final report on the implementation and enhancements of the CDC communications plan. **FY 01:** Plan implemented and enhanced based on CDC communications assessment. **FY 00:** Communication plan developed.	**FY 02**: **FY 01**: **FY 00**: Communication Plan developed. **FY 99:** Communications Plan under development.	Page 146

Performance Goal: Encourage state health departments to develop efficient and comprehensive public health information and surveillance systems by promoting the use of Internet and by focusing on development of standards for communications and data elements.
(*Note: Beginning in FY 1999, this initiative was expanded to address the need of major metropolitan areas for health-sector dedicated communications systems to support detection and response to terrorist events with support from the Public Health Response to Terrorism/Bioterrorism activity (see section 2.12 Bioterrorism)).

Performance Measures	Targets	Actual Performance	Ref.
The number of states with a plan for a comprehensive information network will be increased.	**FY 01:** 20 states. **FY 99:** 18 states.	**FY 01:** **FY 99:** 33 states. **FY 97:** 14 states.	Page 146
The number of states who have implemented a comprehensive information network will be increased.	**FY 01:** 9 states. **FY 99:** 2 states.	**FY 01:** **FY 99:** 4 states **FY 98:** 0 states.	Page 146

Performance Goal: Efficiently respond to the needs of our public health partners through the provision of epidemiologic assistance.

Performance Measure	Target	Actual Performance	Ref.
Based upon established criterial for participation, Epidemic Intelligence Service (EIS) officers will respond to at least 95% of the requests for epidemic assistance from domestic and international partners	**EIS Response to Requests:** **FY 02:** At least 95%. **FY 01:** At least 95%. **FY 00:** At least 95%. **FY 99:** At least 95%.	**EIS Response to Requests:** **FY 02:** **FY 01:** **FY 00**: 99%. **FY 99:** 99%.	Page 146

Performance Goal: Build expertise within CIOs to conduct prevention effectiveness studies of public

health interventions.

Performance Measure	Target	Actual Performance	Ref.
*Increase the number of professional prevention effectiveness staff and fellows.	**Number of Fellows:** **FY 02:** 43. **FY 01:** 43. **FY 00:** 40. **FY 99:** 32.	**Number of Fellows:** **FY 02:** **FY 01:** **FY 00:** 32. **FY 99:** 24.	Page 146
Increase the number of staff in CIOs who can use prevention effectiveness methods. (Measured by the number of staff completing the annual Prevention Effectiveness Course).	**Increase in Staff:** **FY 02:** By 110 persons. **FY 01:** By 110 persons. **FY 00:** By 80 persons. **FY 99:** By 80 persons.	**Increase in Staff:** **FY 02:** **FY 01:** 10/2001. **FY 00:** 80 persons. **FY 99:** 80 persons. **FY 98**: 60 persons.	Page 146
Increase the number of prevention effectiveness studies conducted by CIOs.	**Increase in Studies:** **FY 02:** By 60 studies. **FY 01:** By 60 studies. **FY 00:** By 60 studies. **FY 99:** By 60 studies.	**Increase in Studies:** **FY 02:** **FY 01:** 10/2000. **FY 00**: 60 studies. **FY 99:** 7 studies.	Page 146

Performance Goal: As a long-term objective, CDC will implement accessible training programs to provide an effective work force for staffing state and local health departments, laboratories, and ministries of health in developing countries.

Performance Measure	Target	Actual Performance	Ref.
Provide for effective workforce for staffing state and local health departments and in other public health related organizations. Continued...	**FY 02:** 90% of the second and third classes of the Public Health Prevention Service (PHPS) will remain in public health and 50% will be working in state/local health departments. **FY 01:** 90% of the first and second classes of the PHPS will remain in public health and 50% will be working in state/local health departments. Continued...	**FY 02:** **FY 01**: Continued...	Page 146

Performance Measure	Target	Actual Performance	Ref.
...continued. Provide for effective workforce for staffing state and local health departments and in other public health related organizations.	...continued. **FY 00:** 90% of the first class of the PHPS will remain in public health and 50% will be working in state/local health departments.	...continued. **FY 00:** Following graduation, 76% of the first class remained in public health and 26% are working in state/local health departments. **FY 99:** 50 field assignees.	Page 146
By FY 2001, implement the plan to address needed changes in EIS training methodologies identified in the evaluation study.	**FY 02**: Finalize the implementation of the second phase of the plan. Prepare final report on the implementation process. **FY 01:** Implement the second phase of the plan. **FY 00:** Develop the plan. **FY 99:** The second phase of EIS evaluation will be completed and the first phase findings will be implemented.	**FY 02:** **FY 01:** **FY 00:** Plan Developed. **FY 99**: Second phase of the EIS evaluation has been completed. Results of the first phase are being implemented.	Page 146
Total Program Funding (Dollars in thousands)	**FY 2002:** $ 80,303 (Estimate) **FY 2001:** $ 77,797 (Final Appropriation) **FY 2000:** $ 68,817 (Actual) **FY 1999:** 10/2001 (Actual)		

2.5 Health Statistics

2.5.1 Program Description, Context and Summary of Performance

CDC's National Center for Health Statistics provides leadership in monitoring the health of the American people and is a vital, unique resource for health information. As the Nation's principal health statistics agency, NCHS provides data to guide actions and policies to improve health of Americans. NCHS's mission is to monitor America's health, and our activities mirror the multifaceted aspects of health and health care.

In 1960, the National Office of Vital Statistics and the National Health Survey merged to form NCHS. Since 1987, NCHS has been a part of CDC. NCHS has legislative authority for its programs under Sections 304, 306, and 308 of the Public health Service Act. The Act authorizes data collection, analysis, and dissemination of a broad range of health and health-related areas and provides specific legislative authority to enable the Center to protect the confidentiality of information received in its surveys. In addition, the Act provides for NCHS to undertake and support research, demonstration, and evaluations

regarding survey methods and to provide technical assistance to State and local jurisdictions.

NCHS represents an investment in broad-based, fundamental public health and health policy statistics that meet the needs of a wide range of users. This investment has important payoffs in:

Tracking change in health and health care, particularly as major changes are occurring in private markets and Federal and State policy. NCHS provides mechanisms for obtaining consistent, uniform statistics that allow for comparison across population groups, types of health care providers, and States.

Planning, targeting, and assessing the effectiveness of public programs.

Identifying health problems, risk factors, and disease patterns.

This type of information is important to understanding trends that allow NCHS to anticipate the future directions in the health care system and in health behaviors.

NCHS data are used by virtually the entire range of public health and health policy communities, including:

Congress and other policymakers, to track major initiatives, set priorities for prevention and biomedical research programs, and evaluate outcomes;

Biomedical and health services researchers, to understand trends in diseases, the relationship of observed risk factors to diseases, and the use of health services;

Public health professionals, to track major preventable illnesses, and evaluate the success of intervention programs;

Individual physicians, in evaluating the health and risk factors of their patients (for example, reference standards and norms for conditions such as cholesterol, body weight, and blood pressure, and reference growth charts for children);

Actuaries, including those gauging the health of the Social Security and Medicare trust funds, and setting premiums for health and life insurance; and

Businesses, such as pharmaceutical and food manufacturers, market research firms, consulting firms, and trade associations.

Program Strategies and Activities: NCHS conducts a variety of programs designed to obtain and use health statistics for the purpose of supporting decision-making and research on health. NCHS major data systems are outlined below:

The *National Vital Statistics System* is a Federal/State partnership to produce key indicators of health from birth and death certificates. Vital statistics are among the most fundamental public health measures.

The *National Health Interview Survey (NHIS)* interviews over 100,000 persons each year to monitor a broad range of health issues. The NHIS is frequently augmented by special questionnaires on selected health topics; other interview surveys address focused topics.

The *National Health Nutrition and Examination Survey (NHANES)* is based on sophisticated laboratory and examination centers that move around the U.S. to obtain standardized medical information from direct physical exams, diagnostic procedures and lab tests.

The *National Health Care Surveys* provide a picture of how health care is delivered in the U.S. by collecting data from sites including hospitals, emergency and outpatient departments, ambulatory surgery centers, nursing homes, on a periodic basis.

Additional information on NCHS data systems is available in the Appendix.

An integral part of NCHS' work is the infrastructure and support of these data systems. These activities include survey design, methods research, technology development, data analysis, and the evaluation of data needs and uses that help direct future data activities.

Another key facet of NCHS' work is the translation and dissemination of key health data for Congress, the public, health researchers, policy-makers, and other constituent groups. NCHS is continually striving to improve methods that will make raw statistics meaningful and interesting to an external audience, as well as make our data more readily available to users. This includes:

- supporting key DHHS initiatives, such as *Healthy People 2010*;

- establishing and expanding our partnerships with States, local agencies, and public and private groups to promote capacity development and shared data systems and resources;
- providing valuable health data via the Internet as quickly as possible;
- maintaining the Research Data Center so that health researchers can use NCHS data;
- creating fact sheets on key issues, available over the Internet for key issues; and
- continuing to publish reports on high-priority issues.

These major data systems and related activities serve to support DHHS programs and policies by providing health information for identifying and understanding health problems, tracking goals, and evaluating programs. For example, NCHS data support the following DHHS priorities:

- Address **racial and ethnic differentials in health**, by providing data to identify problems and track progress;

- Implement ***Healthy People 2010*** by providing the underlying data infrastructure for setting targets and tracking progress in meeting health objectives; and

- Support **GPRA** by providing data to identify action areas and by providing neutral, objective tracking data used across HHS agencies.

Partnerships and Links to DHHS Strategic Plan

NCHS collaborates in the development of types of information collected with the HHS Data Council, the National Committee on Vital and Health Statistics, representatives from the States and users of NCHS data in the public and private sectors. Close cooperation with State vital statistics offices assure timely reporting of data.

NCHS provides data to various other Departments and Agencies through collaborative efforts, including the Department of Agriculture, the Environmental Protection Agency, Department of Energy, Department of Education, and Department of Defense. Within HHS, NCHS collaborates with the National Institutes of Health, Health Care Financing Administration, Agency for Healthcare Research and Quality, Health Research and Services Administration and the Administration on Aging.

The mission of NCHS is linked to the following goals and objectives in the DHHS Strategic Plan:

- Goal 5: Improve the nation's public health systems (Objective 5.1); and
- Goal 6: Strengthen the nation's health science research enterprise and enhance its productivity (Objectives 6.1-6.3 , 6.6-6.7).

Performance goals were chosen to support these overarching data needs. In order to meet the goals, the performance measures identified must be met. To this end, NCHS has identified FIVE aggregate performance measures, including two new measures:

1. Monitor trends in the Nation's health through high quality data systems addressing issues relevant to policy makers.
2. Reduce time lags for release of core data systems.
3. Make data more readily accessible to decision-makers and researchers.
4. Improve racial and ethnic data for programmatic and policy decision-making (NEW).
5. Increase capacity for State and local level data (NEW).

NCHS performance measures are directly linked to the HHS Strategic Plan, as several of the goals depend on NCHS data. By providing, timely, quality data that is accessible, HHS is able to identify health problems and track the success of interventions. For example, NCHS data are used to establish national estimates for morbidity and mortality. In HHS Goal 1: Reduce Major Threats to the Health and Productivity of all Americans (Objectives 1.1- 1.3, 1.6-1.8), NCHS data are used to determine the leading causes of death and their underlying causes. Through the identification of these causes from NCHS data, programs throughout

HHS focus on the reduction and elimination of risk factors, such as tobacco use or lack of physical activity.

Other goals in the Strategic Plan that depend on NCHS data are:

- Goal 2: Improve the economic and social well-being of individuals, families, and communities in the United States (Objective 2.5 and 2.6);
- Goal 3: Improve Access to Health Services and Ensure the Integrity of the Nation's Health Entitlement and Safety Net Programs (Objectives 3.1-3.3, 3.6, 3.9); and
- Goal 4: Improve the Quality of Health Care and Human Services (Objectives 4.1 and 4.4)

Performance Summary

CDC has met or exceeded all FY 2000 Health Statistics performance measures.

- With the return of the NHANES to field operations, all four of NCHS' major data systems are in operation, adding a critical dimension to the ability to monitor trends in the Nation's health–through actual physical examinations. After successfully completing the pretest in 1999, the latest NHANES is able to assess the status of the population relative to emerging health issues such as physical fitness, tuberculosis, and exposure to volatile organic compounds. NHANES will complete the first full year of newly automated survey, examination, and laboratory methods, thereby updating survey methods to ensure more accuracy in the field.

- The States and Local Area Integrated Telephone Survey (SLAITS) began field testing the survey in 1999 and will begin full implementation in the fall of 2000. SLAITS will provide data to 50 states and the District of Columbia on children under 18 with special health care needs. It will also provide state-specific estimates of health insurance coverage for all children, and national estimates for the reasons why low-income uninsured children are not enrolled in Medicaid or SCHIP. NCHS will continue to provide necessary technical assistance to the survey.

- CDC exceeded the 5% reduction in time lag for the release of data from the major data systems. This goal will be kept in future years to continually improve the timeliness of NCHS data. Final 1998 birth data was released in March 2000, 15 months after the end of data collection. This is a 17% reduction from the baseline of 18 months.

- Virtually all NCHS publications are now available on the Internet at the same time as they are released in published form or earlier–an objective accomplished far ahead of schedule. NCHS has been able to take advantage of technological advances, such as Internet data releases, to make data more timely and accessible to users.

- The NCHS Research Data Center has allowed for research in a secure environment, without compromising the confidentiality of respondents. In 1999, a baseline was established to measure how many users to the Data Center there were. In 2000, there were between 29 and 33 researchers using the Data Center (there were approximately 18 new research proposals and ten to fifteen projects ongoing from last year).

- NCHS has produced and released data in new formats to document trend, issues, and problems in health. The Adolescent Health Chartbook, part of *Health, United States, 2000*, was completed in July, 2000. A Congressional briefing, sponsored by the American Public Health Association and multiple health organizations, was held in September 2000 to announce the release and to discuss findings.

- For the first time, charts from *Health, United States, 2000* will be updated with current information on the Internet, making data more timely and accessible to users and speeding up the release of data on high-priority topics. Since the release, several charts have been updated via the Internet, allowing researchers and policy-makers to have the most up-to-date data.

- NCHS was an active participant in the publication of the Federal Interagency Forum on Child and

Family Statistics' report, *America's Children: Key National Indicators of Well-being 2000,* a publication devoted to the health, economic status, and well-being of children.

- Other reports on high-priority topics were released, including *Variations in Teenage Birth Rates, 191-1998: National and State Trends.*

- Other NCHS data sets have been released on CD-ROMs or via the Internet speeding the release of data even prior to the availability of a published report.

2.5.2 Goal-by-Goal Presentation of Performance

Performance Goal: Monitor trends in the nation's health through high quality data systems addressing issues relevant to decision makers.

Performance Measures	Targets	Actual Performance	Ref.
Conduct ongoing surveys and data systems that produce detailed trend data needed for monitoring health.	**FY 02:** Conduct **four** ongoing data systems that produce detailed trend data. **FY 01:** Conduct **four** ongoing data systems that produce detailed trend data needed for monitoring health. **FY 00:** Conduct **four** ongoing data systems that produce detailed trend data needed for monitoring health. **FY 99:** Conduct **four** ongoing data systems that produce detailed trend data needed for monitoring health.	**FY 02:** **FY 01:** **FY 00:** Achieved. **FY 99:** Achieved. **FY 97:** Baseline data used in the conduct of 3 major data systems.	Page 152

Performance Measures	Targets	Actual Performance	Ref.
Develop new monitoring tools needed to address emerging topics (e.g., State and Local Area Integrated Telephone Survey--SLAITS).	**FY 02:** NCHS will provide necessary management, oversight and technical support prospective users of SLAITS mechanism. **FY 01:** NCHS will provide necessary management, oversight and technical assistance to support prospective users of SLAITS mechanism. **FY 00:** With initiative funding in FY 2000, will provide necessary management, oversight and technical coordination to facilitate the implementation of a survey on children with special health care needs. **FY 99:** The development of SLAITS, which includes conduct of a pretest in 3 test sites including one Indian Reservation, will be finalized.	**FY 02:** **FY 01:** **FY 00:** Achieved. **FY 99:** Achieved. **FY 98:** Developed the Welfare and Child Well-Being and the Children's Health Insurance and Health Care modules to the SLAITS.	Page 152
Develop new monitoring tools needed to address emerging topics. Continued...	**FY 02:** Refine pans for implementation of new tools for better assessing racial and ethnic data as well as other key health issues. **FY 01:** NHANES has been moved to an ongoing data system and is reflected in performance measure 1a. **FY 00:** NHANES will have completed the first full year of data collection using newly automated survey, examination, and laboratory methods that will improve timeliness of data release. Continued...	**FY 02:** **FY 01:** **FY 00:** Achieved. Continued...	Page 152

Performance Measures	Targets	Actual Performance	Ref.
...continued. Develop new monitoring tools needed to address emerging topics.	...continued. **FY 99:** The development of NHANES, including conduct of a pretest, will be finalized.	...continued. **FY 99:** Pretest conducted and survey fielded.	Page 152
Increase participation in NCHS surveys through improved outreach with communities, constituents, States, and policy-makers.	**FY 02:** Continue to improve and develop new approaches to media and outreach, including Congressional briefings, meetings with state health departments, or press releases.	**FY 00:** Baseline will be established.	Page 152

Performance Goal: Reduce time lags for release of core data systems by 5% per year.

Performance Measure	Target	Actual Performance	Ref.
Reduce time lags for release of core data systems. Continued on next page...	**FY 02:** Reduce time lag of data release by 5%. <u>Vital Statistics (VS):</u> 1. Release of 2000 final mortality data in **18 months** or a **30% reduction** from baseline. 2. Release of 2000 final natality data in **16 months** or an **11% reduction** from baseline. 3. Preliminary VS 2000 data available **within 9 months** or a **10% reduction** from baseline. <u>Health Care Surveys:</u> 1. Release of 2000 National Hospital Discharge Survey data in **18 months** or a **14% reduction** from baseline. <u>Health Interview Surveys:</u> Release of 2000 National Health Interview Survey data in **20 months** or a **23% reduction** from baseline. Continued on next page...	**FY 02:** Continued on next page...	Page 152

Performance Measure	Target	Actual Performance	Ref.
...continued. Reduce time lags for release of core data systems.	...continued. **FY 01:** The overall objective is to reduce time lag of data release by 5%. Vital Statistics (VS): 1. Release of 1999 final mortality data in **18 months** or a **30% reduction** from baseline. 2. Release of 1999 final natality data in **16 months** or a **11% reduction** from baseline. 3. Preliminary VS 1999 data available **within 9 months** or a **10% reduction** from baseline. Health Care Surveys: 1. Release of 1999 National Hospital Discharge Survey data in **18 months** or a **14% reduction** from baseline Health Interview Surveys: 1. Release of 1999 National Health Interview Survey data in **20 months** or a **23% reduction** from baseline. **FY 00:** Time lag in release of final VS will be reduced by **2 months**. Currently data are released within 21 months following the end of the data collection year. **FY 99:** Reduce the time lags for release of core data systems by 5%. Continued...	...continued. **FY 01:** **FY 00:** Achieved. **FY 99:** In 1999, NCHS met or exceeded the 5% reduction in time lag for the release of data from the major data systems. Vital Statistics (VS): 1. Release of the 1997 final mortality data in **18 months--30% reduction.** 2. Release of 1997 final natality data in **16 months–11% reduction.** 3. Preliminary VS 1995 data was available within **10 months–11% reduction**. Continued...	Page 152

Performance Measure	Target	Actual Performance	Ref.
...continued. Reduce time lags for release of core data systems.	...continued.	...continued. Health Care Surveys: 1. Release of 1997 National Hospital Discharge Survey data on CD ROM in **20 months or a 5% reduction** in time lag of data release. Health Interview Surveys: 1. Release of 1997 National Health Interview Survey data in **20 months or a 23% reduction** in time lag of data release from the baseline. **FY 96:** Baseline data used for core data systems are as follows: Vital Statistics (VS): 1. Release of 1993 final mortality data in **26 months.** 2. Release of 1994 final natality data in **18 months**. 3. Preliminary VS 1995 data was available within **10 months.** Health Care Surveys: 1. Release of 1995 National Hospital Discharge Survey Health Interview Survey data in **21 months** on CD-ROM series 10 No. 9 issued February 1997. Health Interview Surveys: Release of 1994 National Health Interview Survey data within **26 months** on CD-Rom series 10 No. 9 issued February 1997. Health Examination Surveys: NHANES III 2nd half (1991-1994) available in **31 months** CD-ROM series 11 No. 1A issued July 1997 NHANES.	Page 152

Performance Goal: Make data more readily accessible to decision makers and researchers.

Performance Measure	Target	Actual Performance	Ref.
Make health statistics available via the Internet.	**FY 02:** Maintain current products. **FY 01:** Develop at least one new product for the Internet, e.g., Health E-STAT-Internet - only data release or Statistical Export and Tabulation System (SETS) interface enabled for the Web. **FY 00:** Monthly vital statistics reports will be available to be viewed, searched, and downloaded via the Internet within 4 months of data release. **FY 99:** Monthly vital statistics reports will be available to be viewed, searched, and downloaded via the Internet within 4 months of data release.	**FY 02:** **FY 01:** **FY 00:** Achieved. **FY 99**: Achieved. **FY 96:** Within 6 months of data release.	Page 152
Release statistics in new formats to speed the release of data on high-priority topics. Continued...	**FY 02:** Maintain reports in current formats. **FY 01**: Release one report in new format. **FY 00**: Release one report. Continued...	**FY 02:** **FY 01:** **FY 00:** NCHS has released *Variations in Teenage Birth Rates, 1991-1198: National and State Trends.* We expect to release *America's Children: Key National Indicators of Well-being* in July, and the *2000 Adolescent Health Chartbook* is expected in the fall. Continued...	Page 152

Performance Measure	Target	Actual Performance	Ref.
...continued. Release statistics in new formats to speed the release of data on high-priority topics.	...continued.	...continued. **FY 99:** *1999 Health and Aging Chart book* published in October 1999. NCHS was an active participant in the publication of Federal Interagency Forum on Child and Family Statistics. 1998 published America's children: Key National Indicators of Well-being. Published Blood Folate and Vitamin B12, United States, 1994-1998. NCHS released CD-ROMs of data, e.g. 1997 Final Natality data with the Statistical Export and Tabulation System - a desktop interface system making analysis of data sets more user friendly. **FY 98:** *Teenage Births in the United States: National and State Trends 1990-96* was published.	Page 152
Allow non-NCHS researchers to access detailed data files in a secure environment, without jeopardizing the confidentiality of respondents — through the NCHS Data Center. Continued...	**FY 02:** 50 researchers outside of NCHS Data Center. **FY 01:** 50 researchers outside of NCHS Data Center. **FY 00:** Establish an NCHS Data Center, which will allow non NCHS researchers to access detailed data files in a secure environment, without jeopardizing the confidentiality of respondents-- 30 researchers outside of NCHS utilizing the NCHS Data Center. Continued...	**FY 02:** **FY 01:** **FY 00:** Thus far, approximately 10 new researchers have submitted proposals to the Data Center and are expected to begin work this year. 10-15 projects are ongoing from last year. Continued...	Page 152

Performance Measure	Target	Actual Performance	Ref.
...continued. Allow non-NCHS researchers to access detailed data files in a secure environment, without jeopardizing the confidentiality of respondents — through the NCHS Data Center.	...continued.	...continued. **FY 99:** (Baseline year) Based on partial year of operation for the NCHS Data Center, 17 projects completed; 6 data sets made available to external investigators and 3 test onsite researchers using the Data Center. **FY 98:** Development of the NCHS Data Center was completed.	Page 152
Produce reports and publications that document trends, issues, and problems in health.	**FY 02:** Produce reports and publications that document trends, issues, and problems in health. **FY 01:** Produce reports and publications that document trends, issues, and problems in health. **FY 00:** Produce reports and publications that document trends, issues, and problems in health.	**FY 02:** **FY 01**: **FY 00:** Achieved. *Health, United States, 2000,* with Adolescent Health Chart book was released in July 2000. **FY 99:** *Health in the United States, 1999*, the report on health status of the Nation, with Health and Aging Chart book - September 1999. **FY 98:** *Health, United States, 1998*, with Socioeconomic Status and Health Chart book. **FY 97:** *Health, United States 1996-97* and Injury Chart book.	Page 152

Performance Measure	Target	Actual Performance	Ref.
Increase the number of articles published in peer-review journals (*Journal of the American Medical Association, New England Journal of Medicine,* etc) that utilize NCHS data.	**FY 02:** a) Increase number of articles by non-NCHS researchers by 10% over 5 years. b) Increase number of articles by NCHS researchers by 10% over 5 years.	**FY 02:** **FY 00:** Baseline to be determined.	Page 152
Increase the number of people who obtain key health information from the NCHS web site.	**FY 02:** Increase the number of people who obtain microdata files from web site by 5% (To be adjusted once baseline is determined).	**FY 00:** Baseline to be determined.	Page 152

Performance Goal: Improve racial and ethnic data for programmatic and policy decision-making.

Performance Measure	Target	Actual Performance	Ref.
Increase the number of subgroups with available data in the Healthy People 2010 template.	**FY 02:** To be determined when template is complete.	**FY 02:** **FY 00:** To be determined.	Page 152

Performance Goal: Increase capacity for state and local Data.

Performance Measure	Target	Actual Performance	Ref.
Work with partners on efforts to implement electronic death registration systems to improve the timeliness and accuracy of vital health data.	**FY 02:** To be determined after baseline is set.	**FY 00:** To be determined.	Page 152
Total Program Funding (Dollars in thousands)	**FY 2002:** $126,978 (Estimated) **FY 2001:** $121,966 (Final Appropriation) **FY 2000:** $111,802 (Actual) **FY 1999:** 10/2001 (Actual)		

Verification/Validation of Performance Measures: The National Center for Health Statistics will maintain administrative documentation that verify performance of these objectives through contractor reports, pretest reports, proceedings from meetings of scientific partners, copies of publications, and records of times data available on the Internet.

2.6 HIV/AIDS, STD, and TB Prevention

2.6.1 Program Description, Context and Summary of Performance

2.6.1a HIV/AIDS

Domestic Activities

HIV remains a deadly infection for which there is no vaccine or cure and for which there are limited treatments. Through December 2000, a total of 775,299 persons in the U.S. had been reported to have AIDS, and more than 448,060 of them have died. CDC estimates that 800,000-900,000 people are living with HIV in America, and as many as one third don't even know they have the virus. And, despite tremendous successes in HIV prevention over the past decade, the number of new HIV infections each year (incidence) in the United States remains unacceptably high. Although incidence has decreased substantially from the high of 150,000 cases per year in the late 1980s, CDC estimates that some 40,000 Americans become infected with HIV every year.

HIV poses a high economic burden as well. Researchers estimate that the discounted cost of lifetime treatment for a person with HIV now averages about $155,000. With 40,000 people infected yearly, America faces an additional annualized cost of more than $6 billion each and every year; the amount CDC spends on preventing new infections pales in comparison.

The face of the HIV epidemic is changing. More people of color (especially women) and young people, are becoming infected with HIV. Among men, the majority of new infections, nearly 60%, continue to be among MSM (men who have sex with men). Recent evidence of resurgent unsafe behaviors and outbreaks of other sexually transmitted diseases (such as syphilis and gonorrhea) among MSM underscore the importance of sustaining and improving prevention efforts for this population. At this point in the epidemic, it is time for CDC to undertake a new strategic plan for HIV prevention.

Over the past two years, CDC has involved over 100 experts in public health, prevention science and affected and infected communities to devise a five-year strategic plan with five goals, under an overarching goal to cut the number of new HIV infections annually in the United States by half to an estimated 20,000 per year by 2005. The five goals are: (1) Decrease by at least 50% the number of persons at high risk for acquiring or transmitting HIV infection by delivering targeted, sustained and evidence-based HIV prevention interventions; (2) Through voluntary counseling and testing, increase from the current estimated 70% to 95% the proportion of HIV-infected people in the United States who know they are infected; (3) Increase from the current estimated 50% to 80% the proportion of HIV infected people in the U.S. who are linked to appropriate prevention, care, and treatment services; (4) Strengthen the capacity nationwide to monitor the epidemic, develop and implement effective HIV prevention interventions and evaluate prevention programs; and (5) Assist in reducing HIV transmission and improving HIV/AIDS care and support in partnership with resource-constrained countries. To achieve these goals, additional resources for HIV prevention will be required. Resources will be invested according to the priorities identified in the plan. CDC will adjust performance measures as the strategic plan is implemented.

To accomplish these goals, CDC uses surveillance and research to target efforts and help determine which prevention messages and intervention strategies have been, or are likely to be, effective. CDC provides financial and technical support for intervention programs at the state and community level. Finally, CDC evaluates efforts to make sure that resources are being used in ways that are both effective and efficient.

Research consistently shows the prevention benefit of early diagnosis and ongoing care and services for people living with HIV. Behavioral science continues to shed light on the best ways to motivate people to adopt and maintain safer behaviors, reducing their risk of acquiring HIV if they are seronegative or of transmitting HIV if they are already infected. It is also thought that new antiretroviral therapies may reduce infectiousness. In addition to leading longer and healthier lives, people who receive ongoing care for HIV disease and services to address other needs, such as substance abuse, lead safer lives–they are more likely to adopt and maintain safer sexual behaviors. Thus, early diagnosis and referral into prevention services, care and treatment have important prevention functions. CDC funds extensive programs of counseling, testing, referral, health education, risk reduction, school-based education, and public information to address these issues.

Research also clearly demonstrates the benefits of community-level HIV prevention programming to prevent those at risk for HIV from becoming infected. CDC's mechanism for supporting communities in the identification of local HIV prevention priorities is called HIV Prevention priorities is called HIV prevention community planning. Community planning empowers local communities across the Untied States to use epidemiologic and surveillance data, behavioral science and other scientific information to make informed decisions about where and how to target resources, and is an integral part of CDC's Five-year strategic plan. CDC funds State and large city health departments to conduct HIV prevention programs using the community planning process to guide their efforts. Both CDC and State and local health departments fund community-based organizations to minority communities. CDC scientists and program consultants provide technical assistance to these providers, support HIV prevention community planning groups that bring all stakeholders together to plan prevention activities, and help grantees build capacity to carry out these activities successfully. Technical assistance includes direct training, guidance, consultation and evaluation as well as dissemination of effective interventions, prevention programs, training and evaluation activities.

As people of color are disproportionately affected by the HIV epidemic, resources have been targeted to address HIV prevention and intervention needs among racial and ethnic minorities. Beginning in FY 1999, CDC has received additional funding through the Minority AIDS Initiative to augment existing prevention efforts reducing disparities in health among ethnic and racial minorities. Funding has supported a variety of targeted programs including programs by faith-based organizations, communications activities to increase knowledge of serostatus, and programs by CBOs serving gay men of color. For example, CDC funded 34 CBOs in FY 2000 through a program to develop and test innovative strategies to increase knowledge fo HIV status. These funds help communities build the basic services and infrastructure needed to implement HIV prevention programs and link HIV-infected and at-risk individuals to other health and social services. Resources are also targeted to reach other high risk populations, including youth, women and incarcerated individuals.

In addition, since FY 1999, CDC has provided additional funds to teth health departments of 14 States, the District of Columbia, and Puerto Rico to support programs that help prevent perinatal (from mother to child) transmission of HIV. Perinatally acquired AIDS has dropped dramatically since the early 1900s, due to the rapid implementation of the use of zidovudine (ZDV) to prevent perinatal transmission. The additional funds provided by CDC help insure that more HIV-infected pregnant women have access to this intervention.

CDC also supports special projects aimed at addressing HIV in correctional facilities. U.S. prisons and jails now hold about 2 million inmates. Approximately 12 million persons pass through U. S. prisons and jails and are released into the community annually, mostly from city and county jails. The prevalence rates for HIV/AIDS are significantly higher among inmates and releaseees, especially women and adolescents, than in the total U.S. population. Of the estimated 220,000 persons living with AIDS in 1996, almost 39,000 (17%) passed through a correctional facility that year. The confirmed AIDS case rate among prisoners (0.51%) was more than 5 times the U.S. rate. Racial and ethnic minorities are disproportionally represented in incarcerated populations, and approximately 80% of prisoners have a

history of substance abuse, including alcohol use. Most facilities lack comprehensive intake and discharge planning to link releases with community-based providers for healthcare, substance abuse treatment, and other services. To address these issues, CDC's strategies for correctional facilities are based on a community approach that includes the collaborative efforts of correctional institutions, public health, and community-based health care and social service organizations. In FY 1999, with Minority AIDS Initiative funding from DHHS, CDC and the Health Resource and Services Administration (HRSA) jointly developed and funded a corrections demonstration project with 7 State health departments to design and implement innovative HIV prevention, care, and continuity of care programs for inmates in jails, prisons, or juvenile detention centers. Projects were also funded to provide technical support for these demonstrations and help highly impacted communities develop capacity to address HIV/AIDS prevention in correctional settings.

These HIV prevention efforts among targeted populations are effective and essential to the reduction of HIV infections.

CDC also supports HIV school health education to reach the 53 million young people who attend more than 117,000 schools across the nation each day. Scientific evidence has been steadily mounting to confirm that school health programs can efficiently reduce certain risk factors and health problems among large populations of young people. Moreover, research has demonstrated that HIV education in schools can be effective in reducing risk behaviors among youth. CDC's efforts to help state and local education agencies implement HIV prevention education programs in schools nationwide include teacher training programs, dissemination of model policies and effective prevention programs, evaluation and technical assistance. The performance measures for this aspect of CDC's HIV/AIDS prevention program monitor students' exposure to HIV/AIDS prevention education in schools and youth behaviors that effect their risk of becoming infected with HIV. The selected GPRA measures are derived from epidemiologic modeling that describes the connections and interrelationships of policies and programs; knowledge, attitudes, and skills; health behaviors; and health outcomes.

International Activities

Globally, nearly 6 million people become infected with HIV each year, including more than 500,000 children. The HIV/AIDS pandemic has had a devastating impact on countries in sub-Saharan Africa. By the end of 1999, 23 million adults and children had been infected, 12 million had died, and 11 million children had been orphaned. This has had a devastating toll on families resulting in loss of income, ongoing costs for care of family member with AIDS and AIDS related illness, and the dissolution of basic family and community structures. In addition, current HIV surveillance and other data reveal an emerging HIV epidemic of similar magnitude in India. The U.S. Government considers the AIDS crisis in Africa and India as an issue of critical importance to the national security of all African nations and India and is resolute in making a substantial commitment to assisting the governments in Africa and India to address this epidemic.

In FY 2000, the U.S. Government launched the Leadership and Investment in Fighting an Epidemic (LIFE) initiative to slow the HIV/AIDS epidemic in 14 countries in Africa and in India. The Centers for Disease Control and Prevention (CDC) in association with other Department of Health and Human Services (DHHS) agencies is working in close collaboration with the U.S. Agency for International Development (USAID) and other federal and local agencies to implement the LIFE initiative.

LIFE Initiative Countries FY2000	
Botswana	Rwanda
Cote d'Ivoire	Senegal

Ethiopia	South Africa
India	Tanzania
Kenya	Uganda
Malawi	Zambia
Mozambique	Zimbabwe
Nigeria	

With an initial appropriation of $35 million in FY 2000, CDC laid the groundwork for the LIFE initiative. CDC brought together experts from other U.S. government and international agencies, to develop a technical strategies document. This document 1) summarizes the best practices in the technical areas in which CDC will be working, 2) presents the CDC approach to its LIFE programs, and 3) provides a roadmap for implementation. In addition, a team of 2-4 CDC staff visited each of the 15 initial LIFE countries. These teams presented the LIFE initiative to in-country partners, assessed the country's HIV priorities and needs, and drafted a program plan that identified priority areas for CDC's in-country LIFE activities. CDC created a series of agreements with US governmental and non-governmental agencies including HRSA and USAID, as well as international organizations such as UNAIDS, to more rapidly implement its in-country LIFE programs. Finally, CDC identified and assigned individuals for in-country assignments to implement the CDC-LIFE program plans. At present, 34 individuals have been identified to staff the offices in 13 of the 15 LIFE countries.

In FY 2001, CDC received an increase of $69.5 million (for a total of $104.5 million) for global HIV/AIDS programs. Within the total, $3 million was provided through CDC to support HRSA activities aimed at improving professional education and training. CDC will continue to work closely with USAID, the Department of Defense, the Department of Labor, NGOs and international institutions. With this increase, CDC proposes to:

- Continuing to implement HIV prevention and care programs and expand to scale programs in the initial LIFE countries in collaboration with USAID and other partners.
- Expanding activities to Asia, Latin America, and other countries in Africa including Angola, Brazil, Cambodia, the Democratic Republic of Congo, Guyana, Haiti, Namibia, Thailand, and Vietnam.
- Providing expert technical and administrative assistance to in-country CDC-GAP staff.
- Continuing to strengthen links with other governmental and non-governmental organizations to implement CDC-LIFE programs more efficiently.

Partnerships and Links to DHHS Strategic Plan

These HIV prevention objectives relate to DHHS Goal 1: *Reduce major threats to the health and productivity of all Americans* and more specifically to Objective 1.6: *Reduce unsafe sexual behaviors* and Objective 1.7: *Reduce the incidence and impact of infectious disease.*

CDC continues to work closely with the Health Resources and Services Administration to evaluate access to care, and to evaluate the extent to which States' efforts have been effective in reducing perinatal transmission of HIV. CDC is collaborating with the Substance Abuse and Mental Health Services Administration and the National Institute on Drug Abuse on issues related to transmission of HIV/AIDS in the injecting drug using population. A working group has also been established to address health care issues in correctional institutions. Development and implementation of the plan to Eliminate Racial and Ethnic Health Disparities is an inter-agency effort within DHHS.

CDC will expand upon existing partnerships with USAID, UNAIDS cooperating agencies (World Health Organization, UNICEF, UNDP, and the UNFPA), sister agencies within the Department of Health and Human Services, other Federal agencies, and an anticipated 15 U.S.-based non-governmental organizations (NGO's) working in HIV prevention in the aforementioned countries in regions.

Performance Summary

The following is an elaboration of the performance goals and measures provided in the goal-by-goal performance presentation in this document.

Domestic Programs

Surveillance of HIV

CDC has a mandate to work with state health departments and the Council of State and Territorial Epidemiologists (CSTE) to monitor incidence, prevalence, morbidity and mortality from all notifiable diseases. CDC works with states to produce HIV surveillance data, which are in turn used by states to guide their prevention programs, care and treatment programs funded by HRSA, as well as other programs funded by SAMHSA and HUD. At the national level, surveillance data is used by HRSA and CDC to guide the allocation of funding among states. CDC is currently working with HRSA to develop an epidemiology profile which will provide, in a single document, all of the epidemiologic information both agencies need to guide their programs.

Historically, newly reported AIDS cases (AIDS incidence) have served as the basis for assessing needs for prevention and treatment programs. However, potent new antiretroviral therapies can delay or may even prevent the development of AIDS in a growing number of HIV-infected persons. AIDS incidence is, therefore, no longer the most appropriate means of describing the needs of different populations and HIV reporting data are increasingly necessary to monitor the effect of the epidemic. However, HIV data are not available from every state. CDC is working with states to assist them in implementing HIV reporting and is studying methods to estimate HIV incidence nationally. In the meantime, until HIV data are available nationwide, CDC will continue to use AIDS data to report nationwide statistics.

Measuring HIV incidence and prevalence in selected high-risk populations: Until HIV data are available nationwide, data on the number of persons living with AIDS (AIDS prevalence), together with the data on the prevalence of those with a diagnosis of HIV infection (where available), will prove more useful than AIDS incidence data for public health planning purposes. AIDS incidence data will be more useful in identifying populations that were diagnosed late with HIV infection or require improved access to timely testing and treatment. Beginning in 2001, new methodologies are expected to be available to measure HIV incidence. Because the proposed incidence studies will be more complex and expensive than the prevalence studies of the past, it is not feasible to include as many study sites. Therefore, the numbers of sites will decrease from 53 to 30.

Number of States that conduct HIV case reporting: In 1999, CDC released the "CDC Guidelines for National HIV Case Surveillance including Monitoring for HIV Infection in AIDS." As of December, 2000, 41 states, Puerto Rico, Guam and the Virgin Islands conducted surveillance for HIV infection. CDC anticipates that by 2003, pending available resources, all States will have implemented HIV surveillance as an extension of their AIDS surveillance activities.

Percent of States adopting recommended security and confidentiality standards: Because survival rates have improved for HIV-infected persons, public health and community groups have raised concerns about the confidentiality of HIV surveillance data. These concerns could hamper State-based initiatives to include HIV case surveillance as part of their overall HIV prevention plan. Therefore, CDC has issued technical guidance for security procedures that include enhanced confidentiality and security activities. At the federal level, HIV/AIDS surveillance data are protected by several federal statutes, which ensure that CDC will not release HIV/AIDS surveillance data for non-public health purposes. In addition, encrypted data, rather than names are provided to CDC. Further, to maintain the confidentiality of persons in whom HIV infection has been diagnosed, CDC has recommended additional standards to enhance the security

and confidentiality of HIV and AIDS surveillance data. In FY 2000, 100% of States continued to maintain security and confidentiality standards.

Increase Participation by federally supported U.S. hemophilia treatment centers (HCTS) in the Universal Data Collection (UDC) system: Acute blood-borne viral infections are monitored in the hemophilia population through patient enrollment in the Universal Data Collection (UDC) system. The UDC began in May 1998 and continues to enroll persons affected with bleeding disorders. Viral testing and reporting of these acute infections is closely monitored. This specimen bank can also be used for look-back investigations for other blood-borne diseases. In FY 99 and 00, performance exceeded set targets because CDC brought centers online at a more rapid pace than expected. Past performance should not affect future target goals since the hemophilia population is finite and patients re-enroll on an annual basis.

Expanding Surveillance for unusual HIV variants: During the 1990s, 2 groups of unusual HIV-1 isolates (group O and group N) were identified in Africa. These viruses are important because they are not consistently detected by the currently-licensed tests used for routine diagnostic testing and blood screening in the US. CDC is conducting surveillance for these viruses and for other immunosuppressive retroviruses which may not be detected by current HIV screening protocols. The data obtained from these surveillance activities are shared with appropriate Federal agencies to inform discussions of blood screening practices in the US and to make appropriate recommendations for modifications or reconfigurations of screening assays.

Measuring access to care, adherence to treatment, and impact of antiretroviral therapy (ART) on long-term survival

***Expand the number of States that are able to measure: 1.) Access to care; 2.) Adherence to treatment; and 3.) Impact of antiretroviral therapy (ART) on long term survival*:** Through a variety of studies, CDC funds State (and city) health departments to collect information on care-related issues such as access to care, adherence to treatment, and impact of care and treatment on long-term survival. Population-based data on access and adherence to HIV care and on long-term survival of those who are infected can inform both care and prevention programs. Population-based surveillance captures data on persons who receive care through the private sector, through Medicaid, or through HRSA funded programs, as well as persons who do not receive care at all. Access to care data provide information on which populations are being diagnosed and linked to care late in the course of their infection, thereby identifying missed opportunities for early testing, care and prevention services. Data on adherence to treatment identify people who are at increased risk for morbidity and mortality because they are not adhering to treatment. In addition, since non-adherence leads to the development of drug-resistant viral strains, data on adherence to therapy identifies areas where surveillance for drug-resistant strains may be necessary. CDC aims to increase information on adherence to care by increasing the number of states funded, as resources become available. Data on changes in long-term survival also identify populations under served by prevention and care programs. In FY 2001, the number of states monitoring access to care and adherence to treatment increased. The number of states monitoring the impact of ART on long-term survival remained the same.

Refine methods for measuring long-term survival: Midway through the 1990's, effective therapies became available for HIV-infected persons. Their effects on decreases in AIDS incidence and in deaths were detected at the population level through surveillance as early as 1996. As the number of deaths have decreased, AIDS prevalence has steadily increased year to year. Long term survival data can assist Federal, State and local programs in planning, directing, and improving the clinical management of HIV and AIDS.

Decrease the number of diagnosed AIDS cases

Marked declines in AIDS incidence began in 1996 and continued into 1998 in association with the widespread use of potent antiretroviral therapies. The rates of decline in AIDS incidence slowed during the latter part of 1998 and 1999. In 1999, the number of cases each quarter stabilized or fluctuated slightly in most populations and geographic areas. As deaths have decreased, the number of persons living with HIV/AIDS has increased. If the number of new infections does not decrease in the number of persons living with HIV and AIDS is expected to continue to increase slightly each year. The increasing numbers of persons living with HIV and AIDS provides further evidence of the importance of continuing CDC prevention programs. At the end of 2000, approximately 319,000 persons who had been reported to have AIDS were alive.

There are multiple reasons for slowing of the decline in AIDS incidence. These may include: reaching the limits of therapy in extending survival; failing therapies due to treatment-resistant viral strains; late HIV-testing; inadequate access to and adherence to treatment in some populations; or recent increases in HIV incidence in some risk groups. To achieve further declines in AIDS incidence and deaths, HIV-infected persons must seek testing earlier in the course of their disease, and receive and adhere to complex treatment regimens. In addition, new HIV infections must be prevented.

Surveillance data reported through June 2000 shows sharply declining rends in perinatal AIDS cases; this decline was strongly associated with increasing ZDV use in pregnant women who were aware fo their HIV status. More recently, treatment with highly active antiretroviral therapy also likely impacted trends in perinatal AIDS incidence. With efforts to maximally reduce perinatal HIV transmission and increase treatment of those infected, declines are likely to continue, but may be impacted by treatment failures and missed opportunities to prevent transmission. National HIV surveillance data is needed to more closely monitor recent perinatal HIV incidence.

CDC HIV prevention programs are aimed at preventing new infections, increasing knowledge of HIV status through voluntary counseling and testing, and linking infected persons with prevention, care, and treatment services. These goals are outlined in CDC's HIV Prevention Strategic Plan. Increasingly, however, preventing progression to AIDS among those who are already infected seems to be dependent upon the availability, receipt and adherence to care and treatment services–activities beyond the scope of CDC's programs.

For this reason, CDC proposes new measures for FY 2001 and 2002 related to the overall goal of reducing AIDS incidence. These are to increase early diagnosis of HIV infection (before progression to AIDS) among persons who acquire their infection through heterosexual transmission, injecting drug use, and male to male sexual contact.

CDC will continue to estimate reductions in HIV incidence as it develops better methodologies for doing so. Funding increases received in 2001 and requested in 2002 are anticipated to reduce new HIV infections in the U.S. in subsequent years. Declines in incidence from programs funded in 2001 will first be achieved in 2002, and will be reported upon in 2003. Further declines, supported by increases requested in 2002 would be achieved in 2003 and reported upon in 2004.

CDC will also continue to measure its performance in reducing perinatal AIDS transmission, and in reducing new infections. CDC will continue to report AIDS incidence data in its surveillance reports, but will use the measure described above to assess the performance of its programs.

Increase Testing Return Rates

Increase percent of HIV-infected persons who return for their results and posttest counseling: In the area of counseling and testing for HIV, a number of factors were considered in estimating the

improvement in the percent of persons who return for their HIV tests. The objective addressing this issue is based upon an annual evaluation of approximately 2.0 million HIV tests, reported from nearly 10,000 sites, each with varying test return rates. Improvements in testing technologies may make "results while you wait" a possibility in some settings, and the value of retaining this as a performance objective for more than the next few years questionable.

In FY 2000, CDC revised its previous GPRA measure to correspond and be consistent with Healthy People 2010 goal 18.8:"Increase to at least 80 percent the proportion of HIV-infected people who know their serostatus." The previous CDC goal was to *improve testing return rates among persons who are tested for HIV.*

Improve HIV intervention and prevention programs and continuity of care

CDC will provide technical assistance to States to help evaluate HIV prevention programs: The purpose of this evaluation program is to develop, test, and implement evaluation systems and tools which States can use to assess their activities and improve their HIV prevention programs. In FY 2000, CDC developed and published a guidance document to assist state health departments in implementing HIV prevention programs. In addition, training and technical assistance was provided to help states implement the guidance. Technical assistance activities focus on how to incorporate CDC's evaluation framework encompassing process evaluation and where possible outcome monitoring and outcome evaluation. States will develop ways to determine whether their prevention programs achieved the proposed goals and objectives.

Provide technical assistance to States to expand disease intervention and prevention activities in correctional settings (federal, State, and local): In FY 1999, CDC began several projects which provide technical assistance to State health departments, correctional facilities, and local community-based organizations that want to offer disease intervention and prevention activities to HIV-infected inmates. With CDC and HRSA funding, tools for curriculum building, needs assessment, and capacity building have been developed which will assist interested agencies in creating an intervention program for high-risk inmates. CDC has also collaborated with SAMHSA and HRSA to offer a cross-training curriculum on substance abuse and infectious disease. These activities are currently targeted to seven demonstration sites for inmate continuity of care (CA, GA, FL, IL, MA, NJ, and NY.) CDC plans to increase the provision of technical assistance by 10% in FY 2001 and by 25% in FY 2002.

Increase the capacity of community-based organizations providing HIV prevention services to persons of color

Fund community-based organizations to provide priority HIV prevention services to high risk individuals, including HIV-infected persons: Recently, with funding from the Minority AIDS Initiative (MAI), including MAID funding from DHHS, CDC has been able to expand the number of awards to directly funded CBOs. In 1999 and 2000, over 90 additional awards were made, bringing the current number of awards to directly funded organizations to more than 230. The majority of these programs address the needs of persons who are considered to be at high-risk for HIV infection, including men who have sex with men, injecting drug users, youth, homeless persons, sex workers, and/or incarcerated persons.

Fund Community Coalition Planning and Implementation Projects to expand community demonstration projects: CDC has recently awarded 20 grants for community coalition planning projects intended to sustain, improve, and expand HIV prevention services for racial/ethnic minority populations. In FY 2000, CDC extended the planning phase of this grant for an additional year. In FY 2001, CDC plans to fund a subset of 10 of these grantees to implement community coalition development projects.

HIV Prevention among school-aged youth

CDC continues to fund 56 State and territorial education agencies, 18 local education agencies, and 41 national non-governmental organizations to implement HIV prevention education programs in schools nationwide. The performance measures for this aspect of CDC HIV/AIDS prevention program monitor students' exposure to HIV/AIDS prevention education in schools and youth behaviors that affect their risk of becoming infected with HIV.

***Achieve and maintain 90% of high school students obtaining HIV/AIDS prevention education*:** In FY 1999, CDC reached its performance targets regarding school health. The data from the 1999 Youth Risk Behavior Surveillance System (YRBSS) demonstrate that 91% of high school students have been taught HIV/AIDS prevention in school. The target for this FY 1999 measure (i.e., to achieve and maintain the percentage at 90% or greater) indicates a significant increase was achieved from 1991 (83%) to 1997 (92%.) Continued increases will be relatively small at this point in the epidemic because the remaining schools are unlikely to be convinced of the importance of providing HIV/AIDS prevention education. This measure will remain because it is highly relevant and important to prevention efforts.

Increase the proportion of adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active: In FY 2000, CDC decided to remove two of its previous HIV GPRA measures (i.e., never having intercourse and using condoms if sexually active) and replace them with the a single measure: the leading health indicator on responsible sexual behavior from *Healthy People 2010:* "Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if sexually active." In addition, this new measure is consistent with language in the draft CDC HIV Prevention Plan which states “our nation’s efforts should increase the proportion of adolescents who consistently engage in behaviors that reduce risk of HIV acquisition or transmission.” The 1999 YRBSS data indicates that the proportion of adolescents (grades 9-12) who abstained from sexual intercourse or used condoms if currently active was 85%. Because this measure was recently developed and adopted for use (May 2000), a
FY 1999 target was never established.

Increase the proportion of Blacks or African American adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active; and
Increase the proportion of Hispanic or Latino adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active: To address the issue of health disparities among ethnic groups, two additional measures were added to address the Black or African American and Hispanic/Latino populations. Surveillance summaries demonstrate that these two ethnic groups are disproportionately affected by HIV/AIDS and, consequently, warrant special attention. By including these two new measures, CDC acknowledges the importance of the Healthy People 2010 overarching goal to eliminate health disparities. In addition, the inclusion of the two new measures complements the purpose of CDC's Racial and Ethnic Approaches to Community Health (Reach 2010) Demonstration Program.

HIV Prevention Limitations

Overall, the following external factors continue to affect CDC's ability to accomplish the goals and objectives for the HIV program:

- All States do not have the required reporting in place to support an integrated surveillance system that includes both AIDS and HIV case reporting.
- It is difficult for CDC and its partners to ask explicit questions about adolescents' sexual behaviors.
- For prevention education programs, sensitive issues exist such as abstinence vs. condom use and needle exchange.
- Surveillance staff at the State/local level have limited capacity for collecting, analyzing, integrating and interpreting data for State/local program usage.
- Recent advances in highly effective antiretroviral medications that allow people to live longer with HIV have led some people to become complacent about practicing safe sex. As people live longer with infection, the potential for spreading infection increases.
- Estimates for HIV incidence have been based on AIDS surveillance data. These data are increasingly limited, primarily by the effect of new therapies on the progression to AIDS.

International Programs

In FY 2001, CDC will collaborate with the U.S. Agency for International Development (USAID) and other federal agencies to combat the AIDS epidemic in 24 countries located in Africa (17), South East Asia (3), Latin America (2), the Carribean (1), and in India. Through the Leadership In Fighting the Epidemic (LIFE) Initiative, CDC is working with these countries to:

Provide technical assistance for primary HIV prevention activities (voluntary HIV counseling and testing, blood safety, behavior change and mother-to-child transmission);

- Help countries develop surveillance programs to target prevention resources and assess the effects of HIV prevention interventions; and
- Provide technical assistance for the care and treatment of opportunistic infections and sexually transmitted diseases and for the provision of palliative care and psychosocial support to people living with AIDS and their families.

Initiate, expand, or strengthen voluntary counseling and testing in partnership with USAID: In FY 2001, CDC is strengthening voluntary counseling and testing (VCT) programs in 19 countries by providing technical assistance to ensure the quality and accuracy of HIV testing, strengthening laboratory diagnostic capabilities, identifying methods to target high-risk groups in hard-to-reach populations and enhancing linkages between VCT and health and social services.

Initiate, expand, or strengthen HIV/AIDS surveillance: In FY 2001, CDC is expanding technical assistance and support to improve national surveillance programs for HIV, STDs and TB to 18 countries and regional programs in Africa, Asia, and in the Caribbean/Latin American region.

***Initiate, expand, or strengthen mother-to-child prevention programs in collaboration with national and international partners*:** In FY 2001, CDC is enhancing support for the implementation of programs that provide interventions to prevent the transmission of HIV from mothers to children in 10 countries (within Africa, India, Asia, and the Caribbean/Latin American region). CDC will continue to identify barriers that exist for accessing these services and evaluate the outcomes of these interventions on both infants and mothers.

Initiate, expand, or strengthen locally appropriate technical assistance for treatment of opportunistic infections, STDs, TB, and other AIDS-related diseases: In FY 2001, CDC is expanding technical assistance and support to improve programs to treat STDs, TB, and other AIDS-related diseases in 15 countries and regional program in Africa, Asia, and in the Caribbean/Latin American region.

2.1.1e Goal-by-Goal Presentation of Performance

Performance Goal: Improve the ability of the Nation's HIV/AIDS surveillance system to identify incidence and prevalence of HIV infection.

Performance Measure	Target	Actual Performance	Ref.
Measure HIV incidence and prevalence in high-risk populations.	**FY 02:** Continue to conduct studies in 30 sites. **FY 01:** Continue to conduct studies in 30 sites. **FY 00:** Continue to conduct 14 studies in approximately 53 sites.	**FY 02:** 9/2003. **FY 01:** 9/2002. **FY 00:** 9/2001. **FY 99:** Conducted 14 studies in approximately 53 sites.	Page 162

Performance Measure	Target	Actual Performance	Ref.
Number of states that conduct HIV case reporting.	**FY 02:** 50 states will conduct HIV case reporting. **FY 01:** 45 states will conduct HIV case reporting. **FY 00:** 40 states will monitor HIV incidence and prevalence.	**FY 02:** 3/2003. **FY 01:** 3/2002. **FY 00:** 41 States, Puerto Rico, Guam and the Virgin Islands conducted HIV case reporting. **FY 99:** 34 states conduct HIV case reporting. Four states and Puerto Rico report cases of HIV infection using coded identifiers. CDC released the "CDC Guidelines for National HIV Case Surveillance including Monitoring for HIV Infection in AIDS."	Page 162
Percentage of states that have adopted recommended security and confidentiality standards.	**FY 02:** 100% of states will maintain standards. **FY 01:** 100% of states will maintain standards. **FY 00:** 100% of states will attain standards. **FY 99:** CDC's guidelines for security and confidentiality contained in the HIV/AIDS surveillance guidelines are updated to include minimum standards of performance for state, local and HIV/AIDS surveillance systems.	**FY 02:** 12/2001. **FY 01:**100% of states have adopted security and confidentiality standards. **FY 00:** 100% of states have adopted security and confidentiality standards. **FY 99:** 100% of states have adopted confidentiality standards.	Page 162

Performance Measure	Target	Actual Performance	Ref.
Increase participation by federally supported U.S. hemophilia treatment centers (HTCS) in the Universal Data Collection (UDC) system. (Total of 134 centers.)	**FY 02:** 100% participation. **FY 01:** 100% participation. **FY 00:** 90% participation. **FY 99:** 40% participation.	**FY 02:** 1/2003. **FY 01:** 1/2002. **FY 00:** 100%participation **FY 99:** 70% participation. **FY 98:** 0% participation.	Page 190
Surveillance for unusual HIV variants will be expanded.	**FY 02:** 8 countries. **FY 01:** 6countries. **FY 00:** 6 countries.	**FY 02:** 6/2003 **FY 01:** 6/2002. **FY 00:** 6/2001. **FY 99:** 2 countries. **FY 98:** 0 countries.	Page 190

Performance Goal: Improve the ability to measure access to care, adherence to treatment, and impact of antiretroviral therapy on long-term survival.

Performance Measure	Target	Actual Performance	Ref.
Expand the number of states that are able to measure: 1. Access to care; 2. Adherence to treatment; and 3. Impact of antiretroviral therapy (ART) on long term survival	**FY 02:** Continue to expand the numbers of states that collect data and can measure care and treatment outcomes. **FY 01**: Continue to expand the numbers of states that collect data and can measure care and treatment outcomes.	**FY 02:** 12/2001. **FY 01:** 1. Access to care: **6 states**; 2. Adherence to treatment: **16 states**; 3. Impact of ART on long-term survival: **11 states.** **FY 00:** 1. Access to care: **5 states**; 2. Adherence to treatment: **15 states**; 3. Impact of ART on long-term survival: **11 states.** **FY 99:** Trends in access to care were measured in **4 states**; adherence to treatment in **12 states**; and impact of ART on long-term survival in **11 states**.	Page 162
Performance Measure	**Target**	**Actual Performance**	**Ref.**

Refine methods for measuring long-term survival.	**FY 02:** Develop new methodology based on findings. **FY 01:** Final results of survival analyses will be published and methodology will be disseminated to states. **FY 00:** Preliminary results of survival analyses from the Adult Spectrum of Disease (ASD) project will be published. ***FY 99:** Trends in long-term survival and rates of transmission of new infections will be measured.	**FY 02:** **FY 01:** The final ASD results of survival analyses were published and the methodology (including software) was made available to states. **FY 00:** Final results were published **FY 99:** Data analysis underway.	Page 162

Performance Goal: Through the implementation of HIV prevention programs, reduce the number of cases of HIV infection and AIDS:

- acquired heterosexually,
- related to injecting drug use;
- associated with male-to-male homosexual contact; and
- acquired perinatally.

Performance Measure	Target	Actual Performance	Ref.
The number of diagnosed heterosexually-acquired AIDS cases will be decreased.	**FY 00:** Will decrease by 10% from the 1997 base of 11,500 AIDS cases diagnosed to 10,350. **FY 99:** Decrease by 10% from the 1995 base of 9,300 AIDS cases diagnosed. (Changes in baseline data from 1995 to 1997 reflects adjustments in AIDS case definitions, and availability of more accurate data).	**FY 00:** 7/2001. **FY 99:** 10,589 cases **FY 98:** 10,175 cases **FY 97:** 10,920 cases	Page 162

Performance Measure	Target	Actual Performance	Ref.
The number of AIDS cases related to male homosexual contact will be decreased.	**FY 00:** Decrease by 10% from the 1997 base of 21,300 cases diagnosed to 19,170. **FY 99:** Decreased by 20% from the 1995 base of 28,600 cases diagnosed to 21,300.	**FY 00:** 7/2001. **FY 99:** 17162 cases **FY 98:** 17,508 cases **FY 97:** 20,369 cases diagnosed.	Page 162
The number of AIDS cases related to injecting drug use will be decreased.	**FY 00:** Decrease by 10% from the 1997 base of 15,700 cases diagnosed to 14,130. **FY 99:** Decrease by 15% from the 1995 base of 17,800 cases diagnosed. (Changes in baseline data from 1995 to 1997 reflects adjustments in AIDS case definitions, and availability of more accurate data).	**FY 00:** 7/2001. **FY 99:** 12,230 cases. **FY 98:** 12,557 cases **FY 97:** 14,916 cases	Page 162
The number of diagnosed perinatally-acquired AIDS cases will be decreased from the 1998 base of 235 diagnosed cases. (Baseline changed from reported cases to diagnosed cases. This is a more accurate measure.)	**Cases Diagnosed:** **FY 02:** 141 cases diagnosed. **FY 01:** 151 cases diagnosed. **FY 00:** 203 cases diagnosed. **FY 99:** The number of perinatally-acquired HIV/AIDS cases will be decreased to 214 cases diagnosed.	**Cases Diagnosed:** **FY 02:** 7/2003. **FY 01:** 7/2002. **FY 00:** 7/2001. **FY 99:** 171. **FY 98:** 235. **FY 97:** 310. **FY 96:** 509.	Page 162
Reduce annual incidence of new HIV infections.	**New HIV Infections/Year:** **FY 02**: 35,600. **FY 01:** 37,900. **FY 00:** 40,000. **FY 99:** Rates of transmission of new HIV infections will be measured.	**New HIV Infections/Year:** **FY 02:** 9/2004.* **FY 01:** 9/2003.* **FY 00:** Estimated baseline is 40,000. **FY 99**: Estimated baseline is 40,000. *Declines in incidence related to funding increases in FY 2001 will not be realized until at least FY 2002, and will be reported in FY 2003.	Page 162

Performance Goal: Among people who acquire HIV infection through heterosexual transmission, injecting drug use, or male to male sexual contact, increase the proportion who are diagnosed with HIV prior to a diagnosis with AIDS.

Performance Measure	Target	Actual Performance	Ref.
Among persons with HIV/AIDS attributed to heterosexual behavior, increase the proportion of persons diagnosed with HIV prior to disease progression to AIDS.	**FY 02:** 83% **FY 01:** 82%	**FY 02:** 7/2003. **FY 01:** 7/2002. **FY 00:** 7/2001. **FY 99:** 81% in areas with HIV reporting.	Page 162
Among persons with HIV/AIDS attributed to injecting drug use, increase the proportion of persons diagnosed with HIV prior to disease progression to AIDS.	**FY 02:** 77% **FY 01:** 76%	**FY 02:** 7/2003. **FY 01:** 7/2002. **FY 00:** 7/2001. **FY 99:** 75% in areas with HIV reporting. **FY 98:** 73% in areas with HIV reporting.	Page 162
Among persons with HIV/AIDS attributed to male to male sexual contact, increase the proportion of persons diagnosed with HIV prior to disease progression to AIDS	**FY 02:** 75% **FY 01:** 74%	**FY 02:** 7/2003. **FY 01:** 7/2002. **FY 00:** 7/2001. **FY 99:** 73% in areas with HIV reporting. **FY 98:** 74% in areas with HIV reporting.	Page 162

Verification and Validation of Performance Measures: Validation/evaluation studies of HIV/AIDS surveillance are conducted on an ongoing basis. Evaluation projects include: reviewing surveillance methodologies and redirecting resources to those case-finding methods that are the most productive; routinely analyzing surveillance data to discover possible under reporting and delays in reporting; monitoring data quality; and assessing completeness of reporting by comparing HIV/AIDS surveillance registries with alternate databases that are not routinely used for case finding (e.g., Medicaid databases).

Further, at least once a year, state health departments are expected to re-abstract demographic, risk, laboratory, and clinical data from a representative sample of records to assess the quality and validity of information collected.

Although completeness of reporting of diagnosed AIDS cases to state and local health departments varies by demographic region and patient population, studies conducted by state and local health departments indicate that reporting of AIDS cases in most areas of the United States is more than 85% complete. Among persons reported with AIDS, reporting of deaths is estimated to be more than 90% complete.

There is a period of time between when a person is diagnosed with AIDS and the report reaches the CDC. This period, is known as a reporting delay (40% of AIDS cases are reported to CDC within 3 months of diagnosis, 80% within one year). Because AIDS Surveillance data based on the date of diagnosis provides the most direct measure of AIDS incidence, mathematical adjustments have to be made to the data to examine trends in more recent time periods. To make accurate adjustments, CDC requires a minimum of six months of additional data after the close of the examined time period. Adjustments for 2000 data will be available June 30, 2001.

Performance Goal: Among persons counseled and tested for HIV infection in CDC-supported sites, increase the percentage of HIV-infected persons who return for their results and post-test counseling.

Performance Measure	Target	Actual Performance	Ref.
Percent of HIV-positive tests for which people returned for counseling:	**% Returning for Counseling:** **FY 02:** 75%. **FY 01:** 70%. **FY 00:** 65%. **FY 99:** 60%.	**% Returning for Counseling:** **FY 02:** 10/2003. **FY 01:** 10/2002. **FY 00:** 10/2001. **FY 99:** 56.3% . **FY 98:** 62.5% **FY 97:** 67.4% **FY 96:** 74.4%.	Page 162

Performance Goal: Improve HIV intervention and prevention programs and continuity of care.

Performance Measure	Targets	Actual Performance	Ref.
CDC will provide technical assistance to States to help evaluate HIV prevention programs	**FY 02**: Guidance, training and technical assistance will be expanded to other prevention partners. **FY 01**: Additional technical assistance on guidance document will be provided based on first year's use. **FY 00**: Evaluating CDC-Funded Health Department HIV Prevention Programs guidance document will be published. Evaluators from all States will attend training conferences on using the guidance. **FY 99**: Evaluation technical assistance will be provided to all community planning groups that request it.	**FY 02**: **FY 01**: **FY 00:** Met: Evaluation guidance was published for CDC funded health department prevention programs. CDC sponsored a conference to train grantees to use this guidance. **FY 99**: Evaluation technical assistance provided on request.	Page 162

Performance Measure	Targets	Actual Performance	Ref.
CDC will provide technical assistance to states to expand disease intervention and prevention activities in correctional settings (federal, state, and local).	**FY 02:** Technical assistance to all community planning groups that request it. **FY 01**: Technical assistance to all community planning groups that request it.	**FY 02**: **FY 01**: Technical assistance provided to community planning groups on request.	Page 162

Performance Goal: Increase the capacity of community-based organizations providing HIV prevention services to persons of color.

Performance Measures	Targets	Actual Performance	Ref.
Fund community-based organizations to provide priority HIV prevention services to high risk individuals, including HIV-infected persons.	**Awards to Community-based Organizations:** **FY 02:** 240. **FY 01:** 240. **FY 00:** 180. **FY 99:** 139.	**Awards to Community-based Organizations:** **FY 02:** 10/2002. **FY 01:** 10/ 2001. **FY 00:** 233. **FY 99:** 139. **FY 97:** 94.	Page 162
Fund Community Coalition Planning and Implementation Projects to expand community demonstration projects.	**Community Development Grants Funded:** **FY 02:** Continue to fund 3 **FY 01:** Continue to fund 3 . **FY 00:** Will fund 3 grants out of 20 planning grants initially funded. **FY 99:** 20 Community Coalition Planning projects funded.	**Community Development Grants Funded:** **FY 02:** 8/2002. **FY 01:** 8/2001. **FY 00:** 10 implementation grants funded. **FY 99:** 20 Community Coalition Planning projects funded. **FY 97:** 0 Community Coalition Planning projects funded.	Page 162

Verification/Validation of Performance Measures: In FY 2001, grantees will report on the development progress and evaluation plans which will be reviewed by CDC staff.

Performance Goal: Reduce the percentage of HIV/AIDS-related risk behaviors among school-aged youth through dissemination of HIV prevention education programs.

Performance Measures	Targets	Actual Performance	Ref.
Achieve and maintain the percentage of high school students who have been taught about HIV/AIDS prevention in school at 90% or greater.	**FY 03:** 90% or greater. **FY 01:** 90% or greater. **FY 99:** 90% or greater.	**FY 03:** July 2004. **FY 01:** July 2002. **FY 99:** 91%. **FY 97:** 92%. **FY 95:** 86%.	Page 123
Increase the proportion of adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active.	**FY 03**: 89%. **FY 01:** 89% .	**FY 03**: July 2004. **FY 01**: July 2002. **FY 99**: 85% **FY 97**: 85%. **FY 95:** 83% (per YRBSS).	Page 123
Increase the proportion of Black or African American adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active.	**FY 03:** 87% **FY 01:** 87%.	**FY 03:** July 2004. **FY 01:** July 2002. **FY 99**: 83%. **FY 97:** 80%. **FY 95:** 82% (per YRBSS).	Page 123
Increase the proportion of Hispanic or Latino adolescents (grades 9-12) who abstain from sexual intercourse of use condoms if currently sexually active.	**FY 03:** 88%. **FY 01:** 88%.	**FY 03:** July 2004. **FY 01:** July 2002. **FY 99**: 84%. **FY 97:** 82%. **FY 95:** 77% (per YRBSS).	Page 123

Verification/Validation of Performance Measures: Data for these performance measure are collected on a biennial basis (during odd-numbered years) through CDC's Youth Risk Behavior Surveillance System (YRBSS), a system designed to focus attention on priority behaviors among youth that cause the most important health problems (see Appendix A.2). YRBSS was developed in a partnership with numerous federal agencies, state departments of education, scientific experts, and survey research specialists. The YRBSS includes separate national, state and local school-based surveys of high school students. A recent study of the YRBSS provides evidence that this adolescent survey has good reliability in measuring health behavior.

Baseline data from the 1995 YRBSS is used because: (a) it was the most recent data available when the original measures were created, and (b) it will allow us to more accurately illustrate trends in sexual behaviors over time.

International

Performance Goal: Working with other countries, USAID and International and U.S. government agencies, CDC will reduce the number of new HIV infections among 15-24 year-olds in sub-Saharan Africa from an estimated two million by 2005.

Performance Measure	Target	Actual Performance	Ref.
Initiate, expand or strengthen HIV/AIDS surveillance.	**Countries/Regions with HIV/AIDS Surveillance.** **FY 02:** 18. **FY 01:** 18. **FY 00:** 15.	**Countries/Regions with HIV/AIDS Surveillance.** **FY 02:** 9/2003. **FY 01:** 9/2002. **FY 00:** 13.	Page 162
In partnership with USAID, initiate, expand, or strengthen voluntary counseling and testing.	**Countries/Regions with Counseling/Testing:** **FY 02:** 19 countries. **FY 01:** 19 countries. **FY 00:** 9 countries and 3 regional areas.	**Countries/Regions with Counseling/Testing:** **FY 02:** 9/2003. **FY 01:** 9/2002. **FY 00:** 12.	Page 162
Initiate, expand, or strengthen locally appropriate technical assistance for treatment of opportunistic infections, STDs, TB, and other AIDS-related diseases.	**FY 02:** 15 countries. **FY 01:** 15 countries. **FY 00:** 5 countries.	**FY 02:** 9/2003. **FY 01:** 9/002. **FY 00:** 11 countries.	Page 162
Initiate, expand, or strengthen mother-to-child prevention programs in collaboration with national and international partners.	**FY 02:** 10 countries. **FY 01:** 10 countries. **FY 00:** 5 countries	**FY 02:** 9/2003. **FY 01:** 9/2002. **FY 00:** 8 countries.	Page 162

Verification/Validation of data: Data are based on administrative records of financial and technical assistance. CDC's FY 2001 funding for global AIDS is available to be expended for two years. As a result, progress achieved with FY 2001 funding will not be measurable until the end of FY 2002.

2.6.1b Sexually Transmitted Diseases Prevention & Control

Programs for the prevention and control of sexually transmitted disease (STDs) were first established in 1936 through collaborative efforts of federal, state and local health authorities. Since then, rates of STDs have declined substantially. Nevertheless, STDs remain epidemic in this country and disproportionately affect adolescents and communities of color.

The U.S. continues to record the highest STD rates in the industrialized world. Domestically, STDs are the most commonly reported infections of all notifiable diseases reported to CDC. Because the majority of STDs are asymptomatic and several of the most common STDs are not routinely reported, the true burden of STDs is many times greater than that reflected by national surveillance statistics. An estimated 15 million new cases of non-HIV STDs, such as syphilis, chlamydia, and gonorrhea, occur each year at a

annual direct and indirect costs of at least $10 billion. STDs are even more costly when viewed in terms of human suffering. Severe, life-long consequences frequently follow these infections, especially among women, adolescents, and infants including: involuntary infertility; potentially fatal tubal pregnancy; other adverse pregnancy outcomes such as stillbirths and newborn (congenital) infections; and increased risk of HIV transmission.

The investment of STD prevention resources *now* results in future savings in direct health care expenditures. For example, syphilis and its complications, such as congenital syphilis and increased HIV transmission, are estimated to cost the American health care system more than $960 million, annually. Conservatively, the health consequences from chlamydial infections in women result in an additional estimated cost of $2.4 billion each year. In addition to causing irreversible and costly reproductive health consequences, chlamydia and syphilis infections increase the risk of HIV transmission among adults at least 3 to 5-fold. The cost benefit of the STD prevention program is conservatively estimated to be at least $10 saved in direct health care costs for every $1 spent on prevention.

Program Strategies and Current Activities

Strategies:
CDC's strategy for STD prevention is to provide national and international leadership through research, policy development, and assistance to states, territories and local health departments in the delivery of services to prevent and control the transmission of STDs and their complications. The Comprehensive STD Prevention Systems (CSPS) grants provide federal support for a community-wide, science-based, interdisciplinary "systems" approach to STD prevention as recommended by the Institute of Medicine (IOM) in its 1997 report, *The Hidden Epidemic: Confronting Sexually Transmitted Diseases*.

Two key components of national STD prevention efforts in FY 2002 will capitalize on two historic opportunities: prevention of STD-related infertility and syphilis elimination.

Infertility prevention: Because the majority of gonorrheal and chlamydial infections are asymptomatic and have devastating consequences for women and their infants, providing screening and treatment services in settings where low income women may not otherwise receive tests is a priority for CDC. Examples of these settings include family planning, prenatal, STD clinics, and other primary care settings where women receive reproductive health services. This screening strategy also includes testing of asymptomatic young men to further reduce rates of chlamydial infection among women. Surveillance, laboratory, behavioral and clinical/epidemiological research, with translation of research findings to assist programs, supplement the screening and treatment activities.

Syphilis elimination: *The National Plan for the Elimination of Syphilis in the United States* outlines the key strategies for elimination. These include: (1) involving communities in the development and implementation of syphilis elimination plans; (2) developing enhanced syphilis surveillance; (3) developing outbreak response preparedness strategies; (4) developing efficient delivery of effective behavioral and biomedical interventions; (5) developing an enhanced health promotion approach to syphilis elimination, including the implementation and evaluation of a national health communication plan; and, (6) assessing both quality and coverage of prevention and control services. Using a targeted approach to elimination, programs will be funded in areas where syphilis persists at high levels (high morbidity areas) and in areas in where potential syphilis epidemics may reignite (potential re-emergence areas). Funding estimates per grant will vary, depending upon the extent of the syphilis problem in the area, with the majority of funds being devoted to those communities and areas that account for the majority of infectious syphilis. At least 30% of funds will be devoted to non-governmental agencies and organizations that represent and serve the affected populations with the expectation that this percentage will increase over time. This multi-systems approach to syphilis elimination will also build sustainable prevention capacity to help these communities address other basic public health issues such as control of infectious diseases and improved reproductive health.

Current Activities:
CDC provides national leadership and grants to states, territories and local health departments to assist health departments, health care providers, and non-governmental organizations with timely, science-based policy, and science-based programs that meet the needs of communities. Activities address the following integrated areas:

- monitoring disease trends using national and local data to focus and assess current prevention activities;
- behavioral, clinical, and health services operational research and evaluation to provide a scientific base for enhancing current program efforts;
- education and training through guideline development and distribution through 10 regional STD/HIV Prevention Training Centers, and programs to ensure that health care professionals are adequately prepared to provide optimal STD treatment, care, and prevention services;
- building national partnerships for STD prevention to raise awareness among health care professionals, the public, and policymakers regarding the importance of STD prevention and the impact of STDs on the health of women and infants, adolescents, and minority populations; and
- supporting the delivery of clinical and prevention services via financial assistance, direct personnel, and technical assistance.

Following are examples of accomplishments in two major program areas: infertility prevention and syphilis elimination.

Infertility Prevention: CDC collaborates with the Office of Population Affairs (OPA) to address infertility. In 1988, CDC and OPA began a collaborative chlamydia screening program as a demonstration project in Public Health Service (PHS) Region X (Alaska, Idaho, Oregon, and Washington). This regional approach brought together family planning, STD, and public health laboratory leaders to develop standards for consistent chlamydia screening and testing activities among all federally funded family planning agencies and STD clinics, and to develop consistent quality assurance and testing procedures among public health laboratories.

In 1993, Congress appropriated funds to support the development of a national Infertility Prevention Program. To accomplish the goals of this national program, CDC and OPA continue work collaboratively with family planning, STD and primary health care programs, and public health laboratories. CDC's infertility prevention program supports chlamydia screening and prevention services to uninsured and under insured populations, primarily through public sector initiatives. Local screening activities for gonorrhea are also supported in these settings when rates of gonorrhea equal to or exceed rates of chlamydia. Surveillance, laboratory and research initiatives are also supported. At the end of 2000, there were screening programs in all 65 STD project areas. In the HHS regions that were initially funded in 1993 (III, VII, VIII, & X), screening and treatment services are provided to approximately 46-52% of women in need. In FY 2001, Congress appropriated additional resources to expand screening and treatment for women in need and in recognition of the problem of re-infection, approved the use of funds to provide services for males as deemed appropriate by the CDC. The utilization of these resources for specific groups will vary from state to state and within states over time as local epidemiology dictates. CDC will award funds to increase the level of coverage from 20% to 28% for at-risk women in Regions I, II, IV, V, VI, and IX.

These regional screening programs have been documented to be highly effective in reducing chlamydial infections in women. Between 1988 and 1999, chlamydia positivity declined 62% (from 13.0% to 4.9%) among women in participating family planning clinics in HHS Region X. Similar reductions have been demonstrated in other parts of the country. In addition, a randomized, controlled trail in an HMO demonstrated that this type of chlamydia screening of at-risk women reduced pelvic inflammatory disease (PID) by almost 60%. A chlamydia screening HEDIS measure that is currently being implemented by the NCQA will help ensure adequate screening among women in managed care plans.

CDC also conducts infertility prevention research, focused on areas closely linked to program service delivery. In FY 2001, research to identify the biologic and behavioral determinants of chlamydia transmission; the feasibility, acceptability, and cost-effectiveness of chlamydia screening for males; and evaluate efficacy of partner-delivered therapy to prevent re-infection in women will be continued.

Gonorrhea remains a major cause of pelvic inflammatory disease (PID) and subsequent infertility and tubal pregnancies in women. Another component of CDC's infertility prevention and STD control efforts in FY 2001 will include convening a consultation of experts from across then U.S. to discuss innovative strategies for gonorrhea prevention.

Syphilis Elimination: CDC collaborates with many national and local partners to implement syphilis elimination efforts. This diverse base of partners includes the National Institutes of Health (NIH), Substance Abuse and Mental Health Services Administration (SAMHSA), National Institute of Justice (NIJ), Association of Public Health Laboratories (APHL), and the American Social Health Association (ASHA). Collaborative efforts include providing technical guidance regarding clinical services, implementing research and demonstration projects and promoting collaboration between local affiliates/constituents on elimination efforts. One such example is the Community Health Outreach Education Services (CHORES) collaboration led by Health Resources and Services Administration (HRSA) to develop a comprehensive health promotion, health education and disease prevention program to be integrated into primary care. Five sites will be selected from CDC designated High Morbidity Areas and will focus on implementing prevention into primary care programs and community involvement.

Primary accomplishments to date include:

- developing and publishing both *The National Plan to Eliminate Syphilis from the United States* and the *Syphilis Elimination Communication Plan*;
- launching the nationwide elimination effort;
- improving accuracy, timeliness and reporting of syphilis cases, developing community based support in the syphilis elimination high morbidity areas;
- implementing of three syphilis elimination demonstration sites in Nashville (Davidson County), TN, Indianapolis (Marion County) IN, and Raleigh (Wake County) NC;
- conducting comprehensive syphilis elimination program assessments;
- providing supplemental grant awards to 32 STD prevention project areas with the highest syphilis morbidity; and
- establishing highly mobile rapid outbreak response teams to assist communities in controlling outbreaks.

As indicated in the table below, substantial progress has been made in syphilis elimination effort.

	2000*	1999	1998	1997
Reported P & S syphilis rate (per 100,000 pop.)	2.2	2.5	2.6	3.2
% syphilis-free counties	80%	79%	78%	75%
# of counties responsible for 50% of new cases	22	25	28	31
Black : White reported rate ratio	24:1	30:1	34:1	43:1
** projected data based on **week 50, 2000**				

In FY 2001 CDC will strengthen community involvement and partnerships, enhance surveillance, conduct rapid outbreak response, expand clinical and laboratory services and enhance health promotion. For those states with rates above the year 2000 objective, grant funds will be provided to enhance areas where there are gaps in prevention services. These may be devoted to any of the basic program elements for a syphilis elimination effort listed above. For those states that have recently had high rates but are now below the year 2000 objective (potentially re-emerging areas), grant funds will be made available to support enhancement of surveillance systems for syphilis, and to develop outbreak and community response capabilities. Additionally, lessons learned and successful initiatives from the syphilis elimination demonstration projects to implement and intensively evaluate components of the national plan in accelerated fashion will be used to inform practice and refine efforts.

Partnerships and Links to DHHS Strategic Plan

These performance measures relate to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans. CDC works with 65 state, large city and territorial health departments to deliver STD prevention and intervention activities. In addition, CDC works with the National Coalition of STD Directors, the American Social Health Association, and the STD Prevention Partnership to help set policy and prevention practice guidelines for STD prevention. CDC also works with the Office of Population Affairs to support the National STD-related Infertility Prevention Program. As part of the Agency's National Plan to Eliminate Syphilis from the United States by 2005, CDC includes *strengthening community involvement and partnerships* as one of its key cross-cutting strategies and works with multiple federal agencies including Health Resources and Services Administration (HRSA), National Institutes of Health (NIH), Substance Abuse and Mental Health Services Administration (SAMHSA), and the National Institute of Justice (NIJ).

Performance Summary

The most recent complete morbidity data are for calendar year 1999. Data for 2000 will be available after review and finalization by the states and project areas in June 2001.

Performance Goal: Reduce STD rates by providing chlamydia and gonorrhea screening, treatment, and partner treatment to 50% of women in publicly funded family planning and STD clinics nationally.

Chlamydia

More than 50% of all preventable infertility among women is a result of sexually transmitted diseases (STD), primarily chlamydia and gonorrhea. In 1999, 659,441 cases of infection with genital Chlamydia trachomatis were reported to CDC. This case count corresponds to a rate of 254.1 cases per 100,000 persons, an increase of 8.5% compared with the rate of 234.2 in 1998. Rates of reported chlamydial infection among women have been increasing annually since the late 1980s when public programs for

screening and treatment of women were first established to avert pelvic inflammatory disease and related complications. The increase in reported infections reflects the continued expansion of chlamydia screening programs and the increased use of more sensitive diagnostic tests for this condition. Chlamydia screening and reporting are likely to expand further in response to the recently implemented Health Plan Employer Data and Information Set (HEDIS) measure for chlamydia screening of sexually active women aged 15 to 25 years of age who are provided care through managed care organizations.

In 1999, the overall reported rate of chlamydial infection among women (404.5 cases per 100,000 females) was four times the reported rate among men (94.7 cases per 100,000 males), reflecting the large number of women screened for this disease. However, with the increased availability of urine testing, men are increasingly being tested for chlamydial infection. From 1995 to 1999, the reported chlamydial infection rate in males increased by 64.1% (from 57.7 to 94.7 cases per 100,000 males) compared with a 27.9% increase in women over this period (from 316.3 to 404.5 cases per 100,000 females). Similar to gonorrhea, the highest rates of chlamydia occur among adolescents.

Data from multiple sources on prevalence of chlamydial infection in defined populations have been useful in monitoring disease burden and guiding chlamydia screening programs. These data show that in many states prevalence of infection remains above the HP2000 goal of 5% for sexually active women aged 15 to 24 years, and in nearly all states chlamydia positivity exceeded the HP2010 objective of 3%. In 1999, the median state-specific chlamydia test positivity among women aged 15 to 24 years who were screened at selected family planning clinics in all states and the Virgin Islands was 5.5% (range, 2.6% to 15.0%) and at selected prenatal clinics in 22 states, 7.2% (range, 4.5% to 14.4%). For economically-disadvantaged women aged 16 to 24 years who entered the U.S. Job Corps in 1999, from 32 states, the District of Columbia and Puerto Rico the overall prevalence was 11.5% thereby not meeting the target of a prevalence less than eight percent. As previously mentioned, continued high rates and increases in reported infections may reflect expansion of chlamydia screening programs and the increased use of more sensitive diagnostic tests for this condition, as well as reflect the higher burden of disease among high risk populations.

In 1999, the median state specific chlamydia test positivity among women aged 15 to 24 years who were screened at selected family planning clinics in all states and the Virgin Islands was 5.5% (range 2.6% to 15.0%) and at selected prenatal clinics in 22 states, 7.2% (range 4.5% to 14.4%). Although these data on prevalence are not entirely comparable because of differences in the performance characteristics of the screening tests and variations in screening criteria, they provide important information on the continuing high burden of disease in these populations. In parts of the United States where large scale chlamydia screening programs have been instituted, prevalence of disease has often declined substantially. During 1988-1999, among 15- to 44-year-old women participating in the screening programs in Health and Human Services (HHS) Region X family planning clinics, chlamydia test positivity declined 62% (from 13.0% to 4.9%). After adjusting trends in chlamydia positivity to account for changes in laboratory test methods and associated increases in test sensitivity, chlamydia test positivity decreased in five of 10 HHS regions from 1998 to 1999, increased in four regions and remained the same in one. Although chlamydia positivity has declined in the past year in some regions, most likely due to the effectiveness of screening and treating women, continued expansion of screening programs to populations with higher prevalence of disease may have contributed to the increases in positivity seen in other regions.

Gonorrhea

Infections due to *Neisseria gonorrhea*, like those resulting from *Chlamydia trachomatis*, are a major cause of pelvic inflammatory disease (PID) in the United States. Occurrence of PID can lead to serious outcomes such as tubal infertility, ectopic pregnancy, and chronic pelvic pain. In addition, epidemiologic and biological studies provide strong evidence that gonococcal infections facilitate the transmission of HIV infection.

Following a 72% decline in the reported rate of gonorrhea from 1975 to 1997, in 1999 the gonorrhea rate increased for the second year in a row. The gonorrhea rate for 1999 (133.2 cases per 100,000 persons) was 1.2% higher than the 1998 rate (131.6 cases per 100,000 persons) and 9.2% higher than the rate reported in 1997 (122.0 per 100,000 persons). The 1999 national rate for gonorrhea exceeds the Healthy People 2000 (HP2000) objective of 100 cases per 100,000 persons. Although increased screening (usually associated with simultaneous testing for chlamydial infection), use of more sensitive diagnostic tests and improved reporting may account for a portion of the recent increase, true increases in disease in some populations and geographic areas also appear to have occurred.

While reported rates of gonorrhea were once substantially higher among men than women, that gap has narrowed. This is most likely due to increased screening in women. Because women are more likely to be asymptomatic than men, cases in women are less likely to be reported. However, gonorrhea rates have increased overall in both men and women. The overall gonorrhea rate in the U.S. among females in 1999 was similar to the rate in 1998 (129.9 and 130.0 cases per 100,000 females respectively). Among women 15-44 years old, the rate of gonorrhea was 286 per 100,000 in 1999. Further, 15-19 year olds had the highest rate of gonorrhea among women of all age categories in 1999. From 1998 to 1999, the gonorrhea rate in men increased by 2.5%, from 132.7 to 136.0 cases per 100,000 males. Among men 20- to 24-year-olds had the highest rate of gonorrhea.

Gonorrhea rates increased or remained constant in all regions of the country between 1997 and 1999. The southern states continue to have the highest gonorrhea rates of any region. The reasons for this may include the level of poverty and access to quality health care and preventive services. In 1999, 26 states and three outlying areas reported gonorrhea rates below the Healthy People 2000 national objective of 100 cases per 100,000 persons. Eight states and one outlying area had reported rates below the Healthy People 2010 objective of 19 cases per 100,000 persons.

Profound racial disparities persist for gonorrhea with 1999 reported rates among non-Hispanic blacks more than 30 times higher than among whites and more than 11 times higher than rates among Hispanics. This disparity most likely reflects differences in access to prevention and treatment services.

Antimicrobial resistance in Neisseria gonorrhea remains a continuing concern, with the most recent threat being the increase in fluoroquinolone resistance that has been reported most notably from several Asian countries. Ciprofloxacin is a fluoroquinolone antibiotic that has been recommended for treatment of gonorrhea by CDC; this is an oral medication that is inexpensive and effectively treats gonorrhea with a single dose. Although only 0.4% of N. gonorrhea isolates tested through the Gonococcal Isolate Surveillance Project (GISP) in 1999 demonstrated resistance to ciprofloxacin, this was a substantial increase from 1998, when only 0.1% of isolates were reported to be resistant. Of note, 14.3% of GISP isolates from Hawaii in 1999 were resistant to ciprofloxacin, requiring a change in the gonorrhea treatment recommendations in that state.

Pelvic Inflammatory Disease (PID)

Women infected with *Neisseria gonorrhea* or *Chlamydia trachomatis* can develop pelvic inflammatory disease (PID), which, in turn, may lead to adverse reproductive consequences such as ectopic pregnancy and tubal factor infertility. If not adequately treated, 20% to 40% of women infected with chlamydia and 10% to 40% of women infected with gonorrhea develop PID. Among women with PID, scarring sequelae will cause involuntary infertility in 20%, ectopic pregnancy in 9% and chronic pelvic pain in 18%. Approximately 70% of chlamydial infections and 50% of gonococcal infections in women are asymptomatic. These infections are detected primarily through screening programs. The vague symptoms associated with chlamydial and gonococcal PID cause 85% of women to delay seeking medical care, thereby increasing the risk of infertility and ectopic pregnancy.

The most recent data available from the National Hospital Discharge Survey indicates that the incidence of PID in women aged 15-44 had slightly decreased in 1998 to 155 cases per 100,000 women. The reported

number of initial visits to physicians' offices for PID through the National Disease and Therapeutic Index (NDTI) has generally declined from 1993 through 1999. However, the reported number of visits in 1999 was slightly greater than the number of initial visits reported in 1998. The decrease in the incidence of PID is possible evidence of intensified nationwide screening and treatment efforts for chlamydia, a cause of PID. These decreases may also be attributable to an increasing trend of outpatient management for PID and an increased use of oral regimens for treatment.

Accurate estimates of pelvic inflammatory disease (PID) and tubal factor infertility from gonococcal and chlamydia infections are difficult to obtain. Definitive diagnosis of these conditions can be complex, requiring for example, laparoscopy or laparotomy, while tubal potency studies may be needed to accurately document these conditions. Most cases of PID are treated on the basis of interpretations of clinical findings, which vary between individual practitioners. In addition, the settings in which care is provided can vary considerably over time. For example, women with PID who would have been hospitalized in the 1980s may be treated in outpatient facilities during the 1990s. Trends in hospitalized PID have declined steadily throughout the 1980s and early 1990s but have remained relatively constant from 1995 through 1998. These trends may be more reflective of changes in the etiologic spectrum (with increasing proportions of more indolent chlamydial infection) and clinical management of PID (from in-patient to outpatient) rather than true trends in disease.

Performance Goal: Reduce the incidence of congenital syphilis.

Congenital syphilis

Congenital syphilis remains a high priority for programmatic activity and each positive test in a child is considered a medical emergency with immediate health services follow-up. The lack of syphilis serologic testing during or late in pregnancy, remains the major reason that congenital syphilis persists in the U.S. The absence of testing is often related to lack of, or late, prenatal care. In 1999, 556 cases of congenital syphilis were reported to CDC, for a rate of 14.3 cases per 100,000 live births.

The rate of congenital syphilis closely follows the trend of P&S syphilis in women. Peaks in congenital syphilis usually occur one year after peaks in P&S syphilis in women. The congenital syphilis rate peaked in 1991 at 107.3 cases per 100,000 live births and has declined by 87% to 14.3 cases per 100,000 live births in 1999. The rate of P&S syphilis in women peaked at 17.3 cases per 100,000 females in 1990 and declined 88% to 2.0 cases per 100,000 females in 1999. Additionally, among 24 states and outlying areas with five or more reported cases of congenital syphilis in 1999, 18 had rates that decreased from the 1998 value. In fact, 11 of these states and Puerto Rico had decreases of 30% or more between the 1998 and 1999 reported rates. Effective prenatal screening programs for patients at high risk of syphilis account for a substantial portion of the reduction.

Performance Goal: Reduce the incidence of primary and secondary syphilis through the development of syphilis elimination action plans for each state that had a primary and secondary syphilis rate in 1995 of greater than or equal to 4 per 100,000 population and an HIV prevalence in childbearing women of greater than 1 per 1,000.

Primary and Secondary Syphilis
Rates of primary and secondary (P&S) syphilis in the United States declined by 88% from 1990 to 1999. Preliminary dat from 2000 indicate a continuation of this trend. Although the 5.4% decline in the number of P&S syphilis cases reported in 1999 is less than the declines of approximately 20% per year since the last major syphilis epidemic peaked in 1990, it is possible that this smaller decline, at least partially, reflects improved case finding and reporting resulting from the national syphilis elimination effort. The number of cases reported in 1999 is the lowest yearly number of cases reported since 1957. Syphilis remains an important problem in the South and in some urban areas in other regions of the country. In 1999 large outbreaks occurred in several states. Recently, outbreaks of syphilis among men who have sex with men (MSM) have been reported in several cities including Seattle, San Francisco, and Los Angeles, possibly reflecting an increase in risk behavior in this population associated with the availability of highly active antiretroviral therapy for HIV infection.

This disease is currently at the lowest level ever reported at a rate of 2.5 per 100,000 in 1999 for primary and secondary syphilis, and is extremely concentrated geographically (half of all new cases reported from only 25 of the 3,115 U.S. counties – less than 1% of counties). Approximately 79% of U.S. counties have already eliminated syphilis and 91% of U.S. counties have a P&S syphilis rate of less than or equal to 4 per 100,000. Of those counties that have not eliminated syphilis, the largest numbers of cases of P&S syphilis were reported from 22 counties, and the three independent cities of Baltimore, MD, Danville, VA, and St. Louis, MO. These 25 areas account for half of the total number of P&S syphilis cases that were reported in the U.S. in 1999.

Syphilis remains one of the most glaring examples of racial disparities in health, with 1999 rates among African-American 30 times those among white Americans, down from a 64-fold differential at the beginning of the last decade. This racial disparity (30:1) is extreme compared to most other health outcomes including AIDS (9:1), infant mortality (2.5:1), and deaths attributable to heart disease (1.5:1). Communities burdened by poverty, racism, unemployment, low rates of health insurance, and inadequate access to health care are often disproportionately affected by syphilis. These larger social issues often impact individual behavior, placing members of these communities at increased risk. Few programs in the U.S. have as great a potential to affect racial disparities in health as CDC's effort to eliminate domestic transmission of syphilis.

2.6.2b Goal-by-Goal Presentation of Performance

Performance Goal: Reduce STD rates by providing chlamydia and gonorrhea screening, treatment, and partner treatment to 50% of women in publicly funded family planning and STD clinics nationally.

Performance Measures	Targets	Actual Performance	Ref.
The prevalence of *Chlamydia trachomatis* among high risk women under 25 will be reduce from 11.6%. *Source: U.S. Department of Labor; U.S. Job Corps Data.	**Prevalence Rate:** **FY 02:** < 8%. **FY 01**: < 8%. **FY 00:** < 8%. **FY 99:** < 8%.	**Prevalence Rate:** **FY 02:** June 2003. **FY 01:** June 2002. **FY 00:** June 2001. **FY 99:** 11.5%. **FY 98:** 11.7%. **FY 95:** 11.6%.	Page 162

Performance Measures	Targets	Actual Performance	Ref.
The prevalence of *Chlamydia trachomatis* among women under the age of 25 in publicly funded family planning clinics will be reduced. Source: Regional Infertility Prevention Programs; CDC.	**Prevalence Rate (median all states):** **FY 02:** < 5%. **FY 01:** < 6%. **FY 00:** < 6%. **FY 99:** < 6%.	**Prevalence Rate (median all states):** **FY 02:** June 2003. **FY 01:** June 2002. **FY 00:** June 2001. **FY 99:** 5.5% **FY 98:** 5.4%. **FY 96:** 9.0%.	Page 162
The incidence of gonorrhea in women aged 15-44 will be reduced. Source: STD Morbidity Surveillance System; CDC.	**Incidence per 100,000 women:** **FY 02:** <250. **FY 01:** <250. **FY 00:** <250. **FY 99:** <250.	**Incidence per 100,000 women:** **FY 02:** June 2003. **FY 01:** June 2002. **FY 00:** June 2001. **FY 99:** 286. **FY 98:** 292. **FY 97:** 261. **FY 96:** 259. **FY 95:** 299.	Page 162
The incidence of PID, as measured by a reduction in hospitalizations for PID, will be reduced in women aged 15-44 and.... Source: National Hospital Discharge Survey by NCHS; CDC. 1998 latest date available.	**Incidence per 100,000 women:** **FY 02:** <125. **FY 01:** <125. **FY 00:** <125. **FY 99:** <125.	**Incidence per 100,000 women:** **FY 02:** 2004. **FY 01:** 2003. **FY 00:** 2002. **FY 99:** 2001. **FY 98:** 155. **FY 97:** 157. **FY 96:** 164. **FY 95:** 162.	Page 162
...the number of initial visits to physicians will be reduced. Source: National Disease and Therapeutic Index (NDTI), IMS America, Ltd.	**Initial Visits to Physician:** **FY 02:** <225,000 visits. **FY 01:** <225,000 visits. **FY 00:** <225,000 visits. **FY 99:** <225,000 visits.	**Initial Visits to Physician:** **FY 02:** 2003. **FY 01:** 2002. **FY 00:** 2001. **FY 99:** 251,000 visits **FY 98:** 234,000 visits. **FY 97:** 261,000 visits. **FY 96:** 286,000 visits. **FY 95:** 262,000 visits.	Page 162

Performance Goal: Reduce the incidence of congenital syphilis through the following strategies:

- More than 95% of women attending publicly funded prenatal clinics will be screened for syphilis *(subject to development of state and local surveillance)*.
- More than 80% of women attending publicly funded prenatal clinics who have untreated or inadequately treated syphilis will be treated within 2 weeks of their initial prenatal visit *(subject to development of state and local surveillance)*.
- More than 95% of pregnant women in counties with a syphilis rate greater than 4 per 100,000 will be screened for syphilis in hospitals at the time of delivery *(subject to development of state and local surveillance)*.

Performance Measure	Targets	Actual Performance	Ref.
The incidence of congenital syphilis per 100,000 births will be reduced. Source: STD Morbidity Surveillance Systems, CDC.	**Incidence of Congenital Syphilis per 100,000 Live Births:** **FY 02:** <12. **FY 01:** <12. **FY 00:** <12. **FY 99:** <20.	**Incidence of Congenital Syphilis per 100,000 Live Births:** **FY 02:** June 2003. **FY 01:** June 2002. **FY 00:** June 2001. **FY 99:** 14.3. **FY 98:** 20.6. **FY 97:** 27.5. **FY 96:** 33.3. **FY 95:** 47.4.	Page 162

Performance Goal: Reduce the incidence of primary and secondary syphilis through the development of syphilis elimination action plans for each state that had a primary and secondary syphilis rate in 1995 of greater than or equal to 4 per 100,000 population and an HIV prevalence in childbearing women of greater than 1 per 1,000.

Performance Measure	Targets	Actual Performance	Ref.
Increase the percentage of U.S. counties that will have an incidence of primary and secondary syphilis in the general population of less than or equal to 4 per 100,000. Source: STD Morbidity Surveillance Systems, CDC.	**FY 02:** >92% of U.S. counties. **FY 01:** >90% of U.S. counties. **FY 00:** >90% of U.S. counties. **FY 99:** 85% of U.S. counties.	**FY 02:** June 2003. **FY 01:** June 2002. **FY 00:** June 2001. **FY 99:** 91% of counties. **FY 98:** 90% of counties. **FY 97:** 87% of counties. **FY 96:** 90% of counties. **FY 95:** 81% of counties.	Page 162

Performance Measure	Targets	Actual Performance	Ref.
Percent reduction in the racial disparity.	**Percent Reduction in Rates:** **FY 02:** 15% to a rate ratio of 17:1. **FY 01:** 15% to a rate ratio of 20:1* **FY 00:** 15% to a rate ratio of 25:1* **FY 99:** 15% to a rate ratio of 29:1* *These targets were recomputed using the actual performance rate ratio for FY 98, FY 99, and FY)) rather than the target ratio for the previous FY.	**Percent Reduction in Rates:** **FY 02:** 6/2003 **FY 01:** 6/2001 **FY 00:** Provisional Data: 24:1 (20% reduction) **FY 99:** 30:1 (12% Reduction) **FY 98:** 34:1 (21% Reduction)	Page 162

Verification/Validation of Performance Measures: STD incidence and prevalence data (hard copy and electronic) undergo ongoing verification and validation procedures including: verification of project area quarterly reports across all data sources; analysis of trend information; analysis of percent unknowns for clinical fields; validation of data edits and updates; as well as constant communication via fax, telephone, and email with project staff. PID hospitalization data is collected through the National Hospital Discharge Survey conducted by the National Center for Health Statistics (NCHS), and PID initial visits to physicians is collected through the National Diagnostic and Therapeutic Index by IMS America, Ltd. Additional feedback is provided to project areas via annual publications and reports.

2.6.1c Tuberculosis Prevention & Control

For decades, CDC has worked to control, and more recently, to eliminate TB in the U.S. The major programmatic goal is the elimination of tuberculosis (TB). TB underwent a sustained decades-long decline until the mid-1980s only to reemerge strongly in the late 1980s and early 1990s. During the 1970s and 1980s resources for TB elimination activities had been reduced and the public health systems for combating the disease deteriorated. Without a sustained response to the disease, TB cases increased 20% between 1985 and 1992. Increased numbers of TB cases among the foreign born and transmission of tuberculosis in institutions, particularly in hospitals and prisons, also contributed to the resurgence of TB. This resurgence brought multidrug-resistant strains of tuberculosis (MDR-TB) and the disease proved more deadly than before. During this same period, the prevalence of HIV/AIDS grew and complicated program strategies designed to prevent and control TB. HIV infection is now recognized as the strongest known risk factor for TB. From 1992 to 1999, increased resources and infrastructure-rebuilding efforts addressed the resurgence of TB in the US; TB cases decreased by 34%.

Until TB can be reduced in the foreign-born, elimination will not be possible. An increasing proportion of cases, approximately 43% in 1999, occur among the foreign-born. While rates declined for all racial/ethnic groups, the 1999 TB rate for Hispanics (12.4/100,000) was more than five times greater than that for whites (2.2/100,000). Disparities in TB were also reflected geographically. In 1999 the four states that border Mexico (Arizona, California, New Mexico and Texas) accounted for 31.8% of all reported TB cases in the United States, 50% of reported TB cases in foreign-born persons, and 72.3% of reported TB cases in persons born in Mexico. Elimination of TB in the U.S. will also require targeted testing and treatment of latent TB infection for other high-risk populations such as those infected with HIV. Individuals infected with

both HIV and TB have an 8%-10% risk per year of developing active TB; persons who are infected with TB alone have a 10% lifetime risk of developing active TB. In 1999, 27 reporting areas that had HIV data for at least 75.0% of 25- to 44-year-old TB patients. In these areas, the proportion of TB patients co-infected with HIV ranged from 0.0% to 77.8%.

Program Strategies and Current Activities

Strategy:
In 1989, CDC published a strategic plan for the elimination of TB from the United States. Since then, the Advisory Council for the Elimination of Tuberculosis (ACET) and the Institute of Medicine (IOM) have both reaffirmed the need for TB elimination. CDC utilizes four key strategies to make elimination a reality:

- Strengthening domestic TB control programs to ensure the prompt identification of persons with TB, and offer appropriate treatment;
- Providing examination and preventive therapy to individuals who have latent TB infection and are at high-risk of developing active/infectious TB disease;
- Addressing the global TB epidemic (eight million new cases and two million deaths annually). CDC provides technical assistance and leadership, participates in the new global STOP TB Initiative, and assists in efforts to control TB in countries whose rates heavily impact the U.S.; and
- Supporting development of improved tools for TB prevention, such as new diagnostics and improved drugs. Recent advance medicine make such tools likely.

In May 2000, the IOM published a report, *Ending Neglect - The Elimination of Tuberculosis in the United States*. The report reaffirms committing to the goal of eliminating tuberculosis from the United States and supports CDC's strategic plan. The report says that tuberculosis elimination will require social mobilization and maintaining public interest and commitment necessary to provide resources for the effort. It also makes specific recommendations; three are highlighted here: (1) Maintaining control of tuberculosis while adjusting control measures to declining incidence of disease and changing systems of health care management; (2) Accelerating the rate of decline of tuberculosis (aimed at elimination) by increasing efforts at targeted tuberculin testing and treatment of latent infection; and (3) Increasing involvement of the U.S. in global tuberculosis control. This latter recommendation acknowledges the fact that tuberculosis is not constrained by national boundaries and that increasing proportions of new cases in this country are among individuals born in countries with high incidences of tuberculosis.

Current Activities:
To achieve the goal of TB elimination, CDC works with local, state, national, and international partners. In addition to promoting more effective use of existing tools for combating TB, CDC currently:

- Funds 68 cooperative agreements with state and local health departments for TB prevention and control (technical assistance, model centers, health care worker training);
- Works with 41 state/local advisory committees, representing patients/providers;
- Collaborates, through contracts (with academic institutions and public health departments) and interagency agreements (with the Veterans Administration) to form a consortium for clinical trials research (currently evaluating new TB drug, Rifapentine); and
- Works with a global partnership to implement the "Stop TB Initiative."

Funds distributed through cooperative agreements are used to:

- Identify people with TB through active surveillance efforts;
- Ensure that people who are identified with active TB are provided with appropriate curative therapy; and their close contacts are evaluated for provision of therapy for latent infection;
- Conduct targeted testing and treatment for persons at high risk for latent infection;
- Provide directly observed therapy to ensure that new TB patients successfully complete treatment;
- Provide state and local areas with on-site assistance on outbreak investigations and control efforts;

- Develop directly and through the Model TB Centers, user friendly products, including course materials, modules, and train-the-trainer materials, that can be used or adapted for area-specific conditions, including TB-related guidelines and templates, as well as other products with national impact.
- Conduct research into new and improved service delivery, diagnostic tests, drug therapies, and vaccine(s);
- Evaluate program activities to ensure the most effective use of resources;
- Collaborate with international organizations to advance TB control activities relevant to the United States.

In addition, CDC works on a number of projects in the Mexico border area. CDC collaborates with the Mexican National Public Health Laboratory Program, and the Association of State and Territorial Public Health Laboratory Directors to coordinate laboratory training between U.S. and Mexican laboratorians. CDC also provides funding to state and local health departments which supports several border health activities. For example, the Texas-Mexico binational border projects are designed to reduce TB by co-managing TB cases and their contacts. The Arizona/Sonora Binational projects monitor MDR-TB on the Arizona/Mexico border, provide patients with directly observed therapy and follow-up with patients who have missed appointments. CURE-TB is a U.S.-Mexico binational referral system for TB patients operated by the San Diego County TB Control Program. Ten Against TB, organized by health officers from the four U.S. and six Mexican border states, strives to strengthen binational collaboration, enhance laboratory capacity and promote TB awareness.

To date, CDC has:
- Effected a 34% decline in national TB cases between 1992 and 1999 through funding of priority activities in state/local jurisdictions;
- Initiated national skin testing through the National Health and Nutrition Examination Survey (NHANES) to ascertain TB infection prevalence in the United States;
- Supported 7 sentinel surveillance sites to describe the geographic distribution of TB DNA fingerprint types and the role of this test to help detect outbreaks;
- Mobilized CDC teams for eight outbreaks and epidemiologic investigations during 2000;
- Started 157,055 persons on therapy for latent TB infection. This will prevent and estimated 7,100 cases of TB and 426 TB-related deaths.

Partnerships and Links to DHHS Strategic Plan

These performance measures relate to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans and Objective 1.7: Reduce the incidence and impact of infectious diseases. CDC works with 68 state, big city and territorial health departments to deliver TB prevention and intervention activities designed to reduce the incidence of TB and eventually eliminate the disease. In addition, CDC works with the Advisory Council for the Elimination of TB, the National TB Controllers Association, the American Lung Association, and the American Thoracic Society to set guidelines, recommendations, and policies related to TB prevention, control and elimination. CDC is currently working with the Federal TB Task Force to development a responsive federal action plan to the IOM report on Ending Neglect: the Elimination of Tuberculosis in the United States. In addition, CDC is working with the National Institutes of Health (NIH) and the Food and Drug Administration (FDA) to develop new diagnostic and treatment tools as well as better vaccines.

Performance Summary

Provisional data reported to CDC indicate that there were a total of 16,372 cases of TB in the U.S. in 2000, representing the eighth consecutive yearly decline of TB cases. Regaining control of TB has clearly been one of the major public health success stories of the decade. TB cases had surged 20% between 1985 and 1992 and this resurgence was accompanied by outbreaks of MDR TB. The IOM report *Ending Neglect - The Elimination of Tuberculosis in the United States* noted that the resurgence of TB throughout the United States was the price of neglect reflected in funding reductions. The report goes on to say tuberculosis elimination is feasible given commitment and necessary resources.

Completion of therapy for TB within 12 months - Because completion of TB therapy is the most effective way to reduce the spread of TB and prevent its complications, this objective is the highest priority for CDC's TB program and its achievement is vital to the reduction of TB cases and the eventual elimination of this disease. By FY 2002, given adequate resources, CDC anticipates 90% of TB patients will complete therapy within 12 months. In 1999, 77.2% of patients were reported to complete therapy, an increase from the 67.6% cases reported in 1994. Patients who do not complete therapy within 12 months are often a very difficult population to treat and require numerous interventions. Significant new efforts must be made to achieve this objective. CDC supports outreach workers, hired from high incidence language, cultural, and ethnic groups in virtually all of the states and territories to help meet this objective. Outreach workers help patients to complete therapy through directly observed therapy (DOT), incentives, and other adherence strategies. CDC and the CDC-funded Model TB Centers are also designing and implementing training and educational aids for health department and health care provider staff to improve skills needed to help achieve this objective.

Percentage of TB patients with initial positive cultures who also have drug susceptibility studies done - Health care providers must know if a newly diagnosed infectious patient is infected with drug sensitive or drug resistant organisms so that appropriate drug therapy can be initiated. If this information is not known, individual patients may receive inadequate therapy leading to spread of drug resistant organisms, additional morbidity, and even outbreaks and mortality from this disease. The rate for this measures in 1999 was 91.9%, up from 73.3% when reported in 1993. With continued progress, it is reasonable to predict programs will achieve the 95% target by FY 2002. Much of this progress is attributable to increased efforts of state and local health departments and hospital infection control practitioners to address the resurgence of TB, and increased funding for health department laboratories to purchase state-of-the-art equipment needed to perform more accurate and rapid laboratory testing and confirmation for TB and Multiple Drug Resistant TB (MDR-TB).

Percent of contacts of infectious cases placed on therapy for latent TB infection who complete a treatment regimen - Contacts of infectious TB patients are at very high risk of developing TB, and therefore must be examined, offered and complete treatment if found to have latent TB infection. This is critical in community efforts to control and prevent TB. The 1998 rate for this measure was 74%, up from 68.4% in 1993. CDC supports its commitment to the identification and examination of contacts and the completion of therapy for contacts who have latent TB infection through cooperative agreements to state and local health departments. Health departments are required to address this objective in their TB cooperative agreement applications. CDC is also designing training for health department TB staff to help improve their skills in this area.

Percent of other high risk persons placed on therapy for latent TB infection who complete a treatment regimen - Completion of treatment for TB infection is a cornerstone of U.S. efforts to reduce TB and eventually eliminate the disease. The 1998 rate for this objective was 62.9%; achieving future targets will require a great deal of effort on the part of health departments and health care providers who serve individuals at risk for TB. In recent years, many health departments have appropriately placed top priority on identification and treatment of TB cases and reducing morbidity and controlling outbreaks. With a lower number of TB cases, CDC is prioritizing activities related to completion of therapy for latent TB infection. In FY 2001, approximately 6% of CDC TB Cooperative agreement base award funds are being devoted to efforts for targeted testing and completion of preventive therapy in groups at high risk for TB. CDC will also be working with HRSA and other federally funded programs serving groups at high risk for TB to better facilitate the testing and completion of therapy for high-risk persons. Recently, CDC and the American Thoracic Society issued new recommendations for the treatment of latent TB infection that will permit 2-month therapy for latent TB infection for certain groups. These new recommendations are an outcome of CDC and NIH supported research. CDC believes these regimens will significantly increase the percent of persons who complete treatment for latent TB infection.

States will report at least 95% complete information to CDC on surveillance items considered essential for TB surveillance - In order to design and carry out community TB prevention and elimination efforts, public health officials and community leaders need to identify the unique and ever changing characteristics about where and in what groups TB is occurring in a community. This information is critical to that effort. Significant progress is being made; states now report from 95% to 100% complete information on 19 of 22 targeted reporting variables. Progress can be attributed to CDC funding for TB surveillance activities and frequent telephone, electronic, and on-site communication between CDC and health department surveillance staff. Two of the under-reported variables for this measure relate to information about HIV-status of TB patients. CDC is working with health department TB staff, state epidemiologists, HIV program staff and others to resolve issues related to these items, many of which are related to HIV confidentiality issues.

2.6.2c Goal-by-Goal Presentation by Budget

After years of level funding, CDC received an increase of $8.6 million for TB for FY 2000. The increase was distributed to state and local health departments to: restore core TB activities; fund three additional sites to participate in targeted testing activities; enhance TB activities in correctional facilities; and strategize and enhance TB elimination activities in low morbidity sites. In FY 2001, there was a $6.01 million increase that will be used for formation of a TB research consortium as well as for enhanced contact investigations and other essential TB prevention and control interventions at the state and local levels.

Performance Goals: Reduce the tuberculosis case rate through the following strategies:

- Collect TB morbidity data from states and territories and ensure complete reporting of surveillance data items considered essential for describing the epidemiology of TB and monitoring trends in TB morbidity for the U.S.
- Fund state/local health agencies to ensure core TB prevention and control activities are carried out: finding all cases of active TB and ensuring completion of therapy; finding and testing persons at high risk for TB (including those who have had recent contact with TB patients), evaluating them for TB infection and disease, ensuring completion of appropriate treatment and conducting TB surveillance and TB public health laboratory activities that are essential to addressing these priorities.
- Collect, analyze, and disseminate TB program evaluation data.
- Complete TB outbreak investigations and issue recommendations where applicable.
- Continue TB diagnostic, treatment, and process training for civil surgeons and panel physicians responsible for screening refugees and immigrants.
- Support and report on TB-related applied and operational research.
- Continue activities with USAID, NIH, the American Lung Association (ALA), the American Thoracic Society (ATS), and other partners in support of the international TB control efforts including the WHO Stop TB Plan.
- Work with health departments, Model TB Centers, ALA, ATS, and other partners to implement the new Strategic Plan for TB Training and Education.
- Provide continued support for the Tuberculosis Information Management System (TIMS) for state and local health departments for surveillance and case management.
- Coordinate with the Federal TB Task Force to develop an action plan to address the Institute of Medicine Report on TB in the US: *Ending Neglect: the Elimination of Tuberculosis in the United States*.:

Performance Measures	Targets	Actual Performance	Ref.
Increase the percentage of TB patients that will complete a course of curative TB treatment within 12 months of initiation of treatment (some patients require more than 12 months).	Percentage of TB Patients that will Complete Treatment: **FY 02:** 88%. **FY 01:** 88%. **FY 00:** 85%. **FY 99:** 85%.	**Percentage of TB Patients that will Complete Treatment:** **FY 02:** Mid-2005. **FY 01:** Mid-2004. **FY 00:** Mid-2003. **FY 99:** Mid-2002. **FY 98:** Mid -2001. **FY 97:** 77.2%. **FY 96:** 75.1%. **F Y 95**: 72.4%. **FY 94:** 67.6%.	Page 162
Increase percentage of TB patients with initial positive cultures who will also have drug susceptibility results.	**Percentage of TB Patients having Drug Susceptibility Results:** **FY 02:** 95% . **FY 01:** 95%. **FY 00:** 93%. **FY 99:** 92%.	**Percentage of TB Patients having Drug Susceptibility Results:** **FY 02:** Mid-2003. **FY 01:** Mid- 2002. **FY 00:** Mid-2001. **FY 99:** 91.9%. **FY 98:** 90.9%. **FY 97:** 88.5%. **FY 94:** 87.4%.	Page 162
Increase minimum percentage of contacts of infectious cases who are placed on therapy for latent TB infection that will complete a treatment regimen.	**FY 02:** 78% of contacts. **FY 01:** 78% of contacts. **FY 00:** 75% of contacts. **FY 99:** 75% of contacts.	**FY 02:** Mid 2004. **FY 01:** Mid- 2003. **FY 00:** Mid- 2002. **FY 99:** Late 2001. **FY 98:** 74.0% of contacts. **FY 97:** 71.6% of contacts. **FY 93:** 68.4% of contacts.	Page 162

Performance Measure	Targets	Actual Performance	Ref.
A minimum percentage of other high risk infected persons who are placed on therapy for latent TB infection will complete a treatment regimen.	**% Other Infected Persons:** **FY 02:** 72% **FY 01:** 72%. **FY 00:** 70%. **FY 99:** 70%.	**% Other Infected Persons:** **FY 02:** Late 2004. **FY 01:** Late 2003. **FY 00:** Late 2002. **FY 99:** Late 2001. **FY 98:** 62.9%. **FY 97:** 60.6%. **FY 93:** 64.8%.	Page 162
Increase percentage of essential surveillance variables states report to CDC with complete information. Continued...	**Percentage of Essential Surveillance Variables:** **FY 02:** 95%. **FY 01:** 95%. **FY 00:** 95%. **FY 99:** States will report to CDC for identified variables. (Note: the percentages reported are the percent with complete reporting results for each variable. Data are collected electronically as part of the national TB surveillance system). Continued...	**Percentage of Essential Surveillance Variables:** **FY 02:** Mid-2003. **FY 01:** Mid-2002. **FY 00:** Mid-2001. **FY 99:** Mid-2000. **FY 97:** Priority variables selected and baselines for complete reporting of these variables are: **DOB** (99.9%); **Country of origin** (99.3%); **Sex** (100.0%); **Race** (99.8%); **Month-year arrived in U.S.** (80.6%); **Status at diagnosis of TB** (100%); **Major site of disease** (99.9%); **AFB Smear** (99.6%); **AFB Culture** (99.8%); **TB skin test** (91.3%); **Initial drug regimen** (99.2%); **Initial drug susceptibility results** (90.4%); **Previous TB** (98.9%); **Year of diagnosis** (94.6%); **HIV status-all ages** (39.3%); **HIV status-ages 25-44** (52.5%); **Resident of correctional facility** (99.2%) **and long term facility** (99.1%); **Sputum conversion** (95.6%); **Reason stopped therapy** (97.6%); **DOT used/not used** (95.7); %); **Date therapy stopped** (97.5%). Continued...	Page 162

Performance Measures	Targets	Actual Performance	Ref.
...continued.	...continued.	...continued.	Page 162
Increase percentage of essential surveillance variables states report to CDC with complete information.		**FY 93:** Priority variables selected and baselines for complete reporting of these variables are: **DOB** (99.9%); **Country of origin** (99.3%); **Sex** (100.0%); **Race** (99.8%); **Month-year arrived in U.S.** (71.8%); **Status at diagnosis of TB** (99.7%); **Major site of disease** (99.9%); **AFB Smear** (99.3%); **AFB Culture** (99.7%); **TB skin test** (83.4%); **Initial drug regimen** (99.9%);**Initial drug susceptibility results** (96.1%); **Previous TB** (99.2%); **Year of diagnosis** (93.3%); **HIV status-all ages** (27.5%); **HIV status-ages 25-44** (41.4%); **Resident of correctional facility** (95.4%) **and long term facility** (82.8%); **Sputum conversion** (90.4%); **Reason stopped therapy** (99.8%); **DOT used/not used** (97.9%); **Date therapy stopped** (99.6%).	
Total Program Funding (Dollars in thousands)	**FY 2002:** $1,068,452 **FY 2001:** $1,044,149 **FY 2000: $** 853,661 **FY 1999:** 10/200	(Estimate) (Final Appropriation) (Actual) (Actual)	

Verification/Validation of Performance Measures: Information on the percentage of TB patients reported in 2002 who completed a course of curative TB treatment within 12 months of initiation of treatment will be available in June 2004. The last TB cases reported in 2002 (on December 31) will not have their 12 months treatment period completed until December 31, 2003. Then six to nine months are needed to tabulate, complete, verify, and report the completion of therapy data. This information is obtained from the National TB Surveillance System.

Information on the percent of TB cases reported in 2002, with initial positive cultures and drug susceptibility results will be available by June 2003. The delay is due to the fact that cases are reported up until December 30, 2002, and then approximately six months are then needed to process specimens, tabulate, complete, verify and report the data. This information is obtained from the National TB Surveillance System.

Information on the completion of therapy for latent TB infection for persons (contacts of infectious cases and other persons at high risk for TB disease) who are started on treatment in 2002 will be available in mid-2004. Depending upon the regimen chosen, it takes 2 to 12 months to complete the therapy so some patients will not complete their regimen until December 31, 2003, then approximately six-nine months are allowed to tabulate, complete, verify and report the data. This information is obtained from the National TB Program Evaluation Reports.

Information on the percent of complete reporting on surveillance data items for TB cases reported in 2002 will be available by June 2003. The delay is due to the fact that cases are reported up until December 30,

2002, and then approximately six months are allowed to tabulate, complete, verify and report the data. This information is obtained from the National TB Surveillance System.

For TB morbidity data and related information submitted via the National TB Surveillance System, the data are initially entered locally or at the State level into CDC developed software. The software contains numerous data validation checks. Additionally, the data are reviewed to confirm data integrity and evaluate data completeness as it is initially received at CDC. Routine data quality reports are generated to assess data completeness and identify data inconsistencies. These data quality reports are shared with the reporting areas and discussed during site visits. CDC also provides funds to selected areas to do more detailed evaluation studies. Finally, at the end of each year, data are again reviewed and verified with each reporting area before the data and counts are finalized and published. In addition, CDC encourages the health departments to conduct active surveillance and many of them do on a regular basis.

For data submitted via the National TB Program Evaluation Reports, the data are reviewed on an ongoing basis as it is received at CDC. Data are checked for accuracy and inconsistencies. Problems are resolved by Division of Tuberculosis Elimination (DTBE) staff working with state and local TB program staff. In addition, during regular visits to state, local and territorial health departments, DTBE staff review TB registers, other records and data systems, and often compare records for verification and accuracy. Finally at the end of each year, data are again reviewed before the data and counts are finalized and published.

2.7 Immunization

2.7.1 Program Description, Context and Summary of Performance

Appropriate administration of safe and effective vaccines remains the most cost-effective method of preventing disease, disability, and death and reducing economic costs resulting from vaccine-preventable diseases. For every dollar spent on diphtheria/tetanus/acellular pertussis vaccination, $27 are saved. Beginning in 1962 when it proposed the first national effort to improve the immunization status of children, CDC has counted immunization among its most vital programs, recognizing it as a core public health activity and perhaps the best example of effective primary prevention. CDC's National Immunization Program (NIP) focuses on several major programmatic areas to achieve its goals, including childhood immunization, adult immunization, and global polio eradication. Although NIP has assistance from many partners, state and local health agencies play a primary role in helping NIP carry out its mission in the United States. NIP ensures quality immunization services by awarding grants to states and large local health departments; offering technical, epidemiologic, and scientific assistance to state and local areas; monitoring immunization coverage; ensuring an adequate supply of vaccine by overseeing vaccine purchases made through CDC contracts and managing the Vaccines for Children program; developing immunization registries; and conducting operational research to develop new and improved delivery strategies.

NIP also has a unique and vital role in monitoring vaccine safety to identify and minimize vaccine-related injuries. Assessments of the risks and benefits of vaccines can also influence vaccine policy and recommendations.

NIP plays a critical role in developing immunization policy by providing technical and scientific support to groups that recommend immunization policy in the United States and globally. These groups include the Advisory Committee on Immunization Practices, the Committee on Infectious Diseases of the American Academy of Pediatrics and the American Academy of Family Physicians, the National Vaccine Advisory

Committee of the National Vaccine Program Office, and the Advisory Commission on Childhood Vaccine of the National Vaccine Injury Compensation Program, among others.

NIP increases community participation, education, and partnerships through public information campaigns, education and training for providers, assistance to communities on building coalitions, and partnerships with community-based organizations, national minority organizations, volunteer groups, vaccine companies, professional organizations and federal agencies.

Global disease eradication and elimination programs are also a shared effort. NIP collaborates with the World Health Organization, Rotary International, the United States Agency for International Development, the Task Force for Child Survival and Development, UNICEF, other centers within CDC, and international agencies, to enhance polio eradication efforts by providing scientific assistance and financial support for vaccine purchase and other key activities. This collaboration is unique among public health initiatives for the unprecedented level of partnerships. Extraordinary progress towards eradicating polio worldwide continues to occur, suggesting that the current global strategies are effective and that achievement of the global objective is feasible. Examples of activities include:

Expanding the network of CDC staff, epidemiologists, technical and scientific officers, and virologists assigned to WHO country and regional offices.

Managing cooperative agreements with UNICEF through which approximately 500 million doses of oral polio vaccine for mass immunization campaigns were provided to 70 polio-endemic countries.

Expanding the global virology laboratory network in cooperation with CDC's National Center for Infectious Diseases.

Implementing a special program to prepare a cadre of trained public health professionals from throughout CDC to complete short-term assignments with WHO.

There are two primary sources to measure attainment of U.S. performance goals. The National Notifiable Diseases Surveillance System (NNDSS) is the data source for tracking cases of vaccine-preventable disease. Provisional data from this system are routinely published in the *Morbidity and Mortality Weekly Report* (*MMWR*). Final data are published in the Annual Summary of Notifiable Diseases.

CDC collects vaccination coverage data at the national, state, and local levels through the National Immunization Survey (NIS). With these data, the impact of national, state, and local policies and programs can be evaluated and monitored, and the results will provide the primary means of monitoring progress toward the goals of the performance plan. These surveys measure vaccine-specific and series complete coverage, with detailed analyses for race/ethnicity and by poverty groups also being presented. Such surveys are necessary to monitor the maintenance or improvement of immunization coverage levels in the target populations of 78 state and major urban areas.

Although coverage for preschool immunization is high in almost all states, pockets of need, or areas within each state and major city where substantial numbers of under-immunized children reside, continue to exist. These areas are of great concern because, particularly in large urban areas with traditionally under-served populations, there is a potential for outbreaks of vaccine-preventable diseases. There are several strategies that are used to address immunization coverage within pockets of need. AFIX (Assessment, Feedback, Incentives, and Exchange) is a tool for assessing immunization coverage and providing feedback to providers. Studies show that this standardized assessment of immunization coverage results in higher coverage rates. Linkages with the Women, Infants, and Children (WIC) Program are also used successfully to increase immunization coverage among low-income preschool children by as much as 40%. Additionally, reminder and recall systems that use manually-generated mail or telephone appointment reminders consistently improve patient compliance for scheduled health visits. These systems work best when parents are reminded just before immunizations are due and recalled immediately after scheduled visits are missed.

Cases of vaccine-preventable diseases are at or near all-time low levels, and childhood immunization rates are at an all-time high. Infrastructure funds are essential to sustain the systems that have resulted in the highest immunization levels ever recorded. These funds are used to implement proven strategies to raise immunization coverage, to conduct vaccine-preventable disease surveillance, to implement disease outbreak control measures, to assure adequate access to and appropriate administration of vaccines, to perform outreach activities, to develop immunization registry systems, to educate providers and parents about the need for timely immunization, and to assess immunization coverage levels and pockets of under-immunized children, among many other activities. Infrastructure investments must be maintained to ensure that proven systems and high immunization levels are not jeopardized.

Partnerships and Links to DHHS Strategic Plan

These performance measures relate to DHHS Goal 1: Reduce the major threats to health and productivity of all Americans. CDC collaborates with the Health Resources and Services Administration, the Health Care Financing Administration, the Food and Drug Administration, the National Institutes of Health, and others in achieving these objectives. These measures specifically address DHHS Objective 1.7: Reduce the incidence and impact of infectious diseases.

Performance Summary

By all counts, efforts to protect children in the U.S. from vaccine-preventable disease have been a success. Cases of most vaccine-preventable diseases of childhood are down more than 97% from peak levels before vaccines were available. No cases of paralytic polio due to indigenous transmission of wild polio virus have been reported in the U.S. since 1979. *Haemophilus influenzae* type b (Hib) invasive disease, the main cause of bacterial meningitis, has declined by more than 99% in children under five since the introduction of the vaccine. Measles hit a low of 67 reported cases in 1999. Coverage levels for preschool children are at an all-time high for all racial and ethnic groups.

Among persons 65 years of age or older, the percentage receiving vaccine against influenza rose from 33% in 1989 to 64% in 1998. Similarly, the coverage rate for pneumococcal vaccine increased from 15% to 46% over the same period.

The reduction in the number of indigenous cases of mumps has exceeded our goal of 500 cases. In 1999, there were only 387 cases of mumps; in 2000, the incidence was further reduced to 323 cases. This reduction is linked to the effectiveness of the Measles-Mumps-Rubella vaccine and its coverage rate.

In 2000, the coverage rate for four doses of Diptheria-Tetanus-Pertussis (DTaP) containing vaccine did not yet achieve the 90% goal. However, the rate has steadily increased since the change to a four dose schedule, as recommended by ACIP in 1991. This goal has been the one of the most difficult for CDC to achieve because it requires that the fourth dose be given to the child after the second year of life. The administration of DTaP tends to coincide with regular well-baby visits through the third dose; however, the fourth dose does not, requiring a visit specifically for this purpose. CDC does have coverage rates of 95% for the first three doses. These are considered to be the most critical, however, CDC and the ACIP feel strongly that the fourth and fifth doses are important for full vaccination. Varying state requirements for the four-dose vaccine schedule may have also led to a slower increase in coverage

On the global front, as with smallpox, worldwide eradication of polio is now within our grasp. In 1999, the American Region of WHO completed its eighth year without a reported case of polio. The Western Pacific Region (i.e., China Vietnam, and Cambodia) is close to achieving regional eradication of polio. More than 80 countries conducted mass immunization campaigns in 1999 vaccinating over 450 million children aged less than 5 years. The network of CDC staff, epidemiologists, technical officers, and virologists assigned to WHO expanded in Asia and Africa. As of December, 2000, CDC supports more than 120 experts in polio eradication programs throughout the world. One hundred twenty-eight public health professionals throughout CDC were trained in 2000 to complete additional short-term assignments. Additionally, measles cases in the Western Hemisphere have declined 85% from 1990 to 1998.

2.7.2 Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the number of indigenous cases of vaccine-preventable diseases.

Performance Measure	Target	Actual Performance	Ref.
The number of cases of paralytic polio, rubella, measles, *Haemophilus influenzae* invasive disease (type b and unknown) in children under 5 years, diphtheria, congenital rubella syndrome, and tetanus will remain at or be reduced to 0. *Indigenous cases only **To be in line with Healthy People 2010, beginning in 2001, the diphtheria and tetanus cases will be measured in persons <35 years of age.	**FY 02:** Paralytic polio 0 Rubella 0 Measles 0 *Haemophilus influenzae* 0 Diphtheria **(<35 years)**** 0 Congenital rubella syndrome 0 Tetanus **(<35 years)**** 0 **FY 01:** Paralytic polio 0 Rubella 0 Measles 0 *Haemophilus influenzae* 0 Diphtheria **(<35 years)**** 0 Congenital rubella syndrome 0 Tetanus **(<35 years)**** 0 **FY 00:** Paralytic polio 0 Rubella 0 Measles 0 *Haemophilus influenzae* 0 Diphtheria **(<25 years)** 0 Congenital rubella syndrome 0 Tetanus **(<25 years)** 0 **FY 99:** Paralytic polio 0 Rubella 0 Measles 0 *Haemophilus influenzae* 0 Diphtheria **(<25 years)** 0 Congenital rubella syndrome 0 Tetanus **(<25 years)** 0	**FY 02:** 9/2003. **FY 01:** 9/2002. **FY 00:** (Provisional data) Paralytic polio 0 Rubella 152 Measles 63 *Haemophilus influenzae* 173 Diphtheria **(<25 years)** 1 Congenital rubella syndrome 7 Tetanus **(<25 years)** 3 **FY 99:** Paralytic polio 0 Rubella 267 Measles 67 *Haemophilus influenzae* 122 Diphtheria **(<25 years)** 0 Congenital rubella syndrome 6 Tetanus **(<25 years)** 5	Page 177
Continued...	Continued...	Continued...	

Performance Measure	Target	Actual Performance	Ref.
...continued. The number of cases of paralytic polio, rubella, measles, *Haemophilus influenzae* invasive disease (type b and unknown) in children under 5 years, diphtheria, congenital rubella syndrome, and tetanus will remain at or be reduced to 0. *Indigenous cases only **To be in line with Healthy People 2010, beginning in 2001, the diphtheria and tetanus cases will be measured in persons <35 years of age.	...continued.	...continued. **FY 98:** Paralytic polio 0 Rubella 364 Measles 74 *Haemophilus influenzae* 163 Diphtheria (<25 years) 1 Congenital rubella syndrome 7 Tetanus (<25 years) 9 **FY 97:** Paralytic polio 0 Rubella 181 Measles 81 *Haemophilus influenzae* 152 Diphtheria (<25 years) 3 Congenital rubella syndrome 5 Tetanus (<25 years) 5	Page 177
The number of indigenous cases of mumps will be reduced from 666 (1998) to 500.	**Cases of Mumps:** **FY 02:** 500. **FY 01:** 500. **FY 00:** 500. **FY 99:** 500.	**Cases of Mumps:** **FY 02:** 9/2003. **FY 01:** 9/2002. **FY 00:** 323. **FY 99:** 387. **FY 98:** 666. **FY 97:** 683.	Page 177
The number of cases of pertussis among children under 7 years of age will be reduced.	**FY 02:** 2,000 cases. **FY 01:** 2,000 cases. **FY 00:** 2,000 cases. **FY 99:** 2,000 cases.	**FY 02**: 9/2003. **FY 01:** 9/2002. **FY 00**: 2,802 cases. **FY 99:** 3,247 cases. **FY 98:** 3,417 cases. **FY 97:** 3,043 cases.	Page 177

Performance Goal: Ensure that 2-year-olds are appropriately vaccinated.

Performance Measure	Target	Actual Performance	Ref.
Achieve or sustain the following immunization coverage of at least 90% among children 19- to 35-months of age for each vaccine: 1. 4 doses of Diphtheria-Tetanus-Pertussis containing vaccine 2. 3 doses of *Haemophilus influenzae* type b vaccine 3. 1 dose of Measles-Mumps-Rubella vaccine* 4. 3 doses of Hepatitis B vaccine 5. 3 doses of Polio vaccine 6. 1 dose of Varicella vaccine.** 7. 4 doses of Pneumococcal Conjugate vaccine*** Continued...	**FY 02:** Achieve or sustain immunization coverage of at least 90% among children 19- to 35 months of age. ****FY 01:** Achieve or sustain immunization coverage of at least 90% among children19- to 35-months of age. **FY 00:** Achieve or sustain immunization coverage of at least 90% among children19- to 35-months of age. Continued...	**FY 02:** 8/2003. **FY 01:** 8/2002. **FY 00:** (Provisional Data–Final data available 8/2001): 1. 4 doses of Diphtheria-Tetanus-Pertussis containing vaccine **(83%)** 2. 3 doses of *Haemophilus influenzae* type b vaccine **(94%);** 3. 1 dose of Measles-Mumps-Rubella vaccine* **(91%)**; 4. 3 doses of Hepatitis B vaccine **(90%)**; 5. 3 doses of Polio vaccine **(90%)**. 6. 1 dose of Varicella vaccine **(63%)**. Continued...	Page 177

Performance Measure	Target	Actual Performance	Ref.
...continued. Achieve or sustain the following immunization coverage of at least 90% among children 19- to 35-months of age for each vaccine: 1. 4 doses of Diphtheria-Tetanus-Pertussis containing vaccine 2. 3 doses of *Haemophilus influenzae* type b vaccine 3. 1 dose of Measles-Mumps-Rubella vaccine* 4. 3 doses of Hepatitis B vaccine 5. 3 doses of Polio vaccine 6. 1 dose of Varicella vaccine.** 7. 4 doses of Pneumococcal Conjugate vaccine*** *Includes any measles-containing vaccine. **Performance targets for newly recommended vaccines will begin 5 years after the ACIP recommendation. The varicella measure will begin in 2001, even though coverage is being reported earlier. ***Performance targets for newly recommended vaccines will begin 5 years after the ACIP recommendation. The pneumococcal conjugate measure will begin in 2006, even though coverage will be reported earlier.	...continued. **FY 99:** Achieve or sustain immunization coverage of at least 90% among children 2 years of age for each vaccine.	...continued. **FY 99:** 1. 4 doses of Diphtheria-Tetanus-Pertussis containing vaccine **(83%)** 2. 3 doses of *Haemophilus influenzae* type b vaccine **(94%);** 3. 1 dose of Measles-Mumps-Rubella vaccine* **(92%)**; 4. 3 doses of Hepatitis B vaccine **(88%)**; 5. 3 doses of Polio vaccine **(90%)**. 6. 1 dose of Varicella vaccine **(58%)**. **FY 98:** 1. 4 doses of Diphtheria-Tetanus-Pertussis containing vaccine **(84%)** 2. 3 doses of *Haemophilus influenzae* type b vaccine **(93%);** 3. 1 dose of Measles-Mumps-Rubella vaccine* **(92%)**; 4. 3 doses of Hepatitis B vaccine **(87%)**; 5. 3 doses of Polio vaccine **(91%)**. 6. 1 dose of Varicella vaccine **(43%)**. *Includes any measles-containing vaccine.	Page 177

Verification/Validation: Data is collected through the National Immunization Survey (NIS), CDC, NIP (see Appendix A.2).

Performance Goal: Increase pneumococcal pneumonia and influenza vaccination among persons 65 years.

Performance Measure	Target	Actual Performance	Ref.
The rate of vaccination among persons 65 years will be increased for influenza and pneumococcal pneumonia.* *Influenza and pneumococcal vaccination coverage goals for adults aged 65 and older are based on the 90% coverage goals in Healthy People (HP) 2010. It is expected that influenza vaccination coverage will increase approximately 2% per year and pneumococcal vaccination will increase about 3% per year to realize the HP 2010 goals.	**FY 02: Influenza**: 74% vaccination rate. **Pneumococcal pneumonia**: 66% vaccination rate. **FY 01**: Influenza**: 72% vaccination rate. **Pneumococcal pneumonia:** 63% vaccination rate. **FY 00:** Influenza: 70% vaccination rate. **Pneumococcal pneumonia:** 60% vaccination rate. **FY 99:** The rate of vaccination among non-institutionalized high-risk populations. **Influenza:** 60% vaccination rate. **Pneumococcal pneumonia:** 54% vaccination rate. **Beginning in FY 01, the performance will be reported as in HP 2010 – age adjusted to the year 2000 standard population.	**FY 02:** 9/2004. **FY 01:** 9/2003. **FY 00:** 9/2002. **FY 99:** 9/2001. **FY 98: Influenza:** 63% vaccination rate. **Pneumococcal pneumonia:** 46% vaccination rate. **FY 97**: Influenza: 63% vaccination rate. **Pneumococcal pneumonia:** 42% vaccination rate. **FY 95: Influenza:** 58% vaccination rate. **Pneumococcal pneumonia:** 34% vaccination rate.	Page 177

Performance Goal: Collaborate with domestic and international partners to help achieve WHO's goal of global polio eradication by December 31, 2000.

Performance Measure	Target	Actual Performance	Ref.
Purchase doses of oral polio vaccine needed to assist in conducting mass immunization campaigns in Asia, Africa, and Europe.	**FY 02:** 558 million doses. **FY 01:** 625 million doses. **FY 00:** 750 million doses. **FY 99:** 445 million doses.	**FY 02:** 2/2003. **FY 01:** 2/2002. **FY 00:** 593 million doses. **FY 99:** 427 million doses. **FY 98:** 390 million doses.	Page 177
Expand the network of CDC and CDC-funded staff, virologists, epidemiologists, technical and scientific officers on long-term assignments in WHO country and regional offices.	**Persons on Assignment:** **FY 02:** 100. **FY 01:** 90. **FY 00:** 82. **FY 99:** 67.	**Persons on Assignment:** **FY 02:** 2/2003. **FY 01:** 2/2002. **FY 00:** 120 (provisional data). **FY 99:** 75 persons. **FY 98:** 60 persons.	Page 177
Expand a special program to prepare a cadre of trained public health professionals throughout CDC to complete short-term assignments with WHO.	**Trained public health professionals:** **FY 02:** 124. **FY 01:** 100. **FY 00:** 60. **FY 99:** 50.	**Trained public health professionals:** **FY 02:** 2/2003. **FY 01:** 2/2002. **FY 00:** 128. **FY 99:** 100. **FY 98:** 23.	Page 177

Data validation/verification: UNICEF provides the number of doses of polio purchased with CDC funding and the number of CDC-funded staff on assignment with WHO in the form of an annual report as part of the CDC/WHO cooperative agreement CDC personnel data and CDC/WHO cooperative agreement staffing records are also used to validate and verify data. Under the Stop Transmission of Polio campaign, annual training reports are available to determine the number of public health professionals trained.

Performance Goal: Improve vaccine safety surveillance.

Performance Measure	Target	Actual Performance	Ref.
Use new data mining techniques to increase the number of detected true and false signals of adverse events associated with vaccination.	**FY 02:** 5 new techniques.	**FY 02:** **FY 01:** **FY 00:** 1-2 new techniques.	Page 177

Performance Measure	Target	Actual Performance	Ref.
Improve the ability of health care providers to report vaccine adverse events, including those associated with influenza vaccine, by pilot testing electronic reporting to VAERS in managed care organizations.	**FY 02:** 3 pilot tests.	**FY 02:** **FY 01:** **FY 00:** 0 pilot tests.	Page 177
Expand the Vaccine Safety Datalink (VSD) sites to increase the number of persons under active surveillance for vaccine safety.	**FY 02:** 12 million vaccine recipients.	**FY 02:** **FY 01:** **FY 00:** 6 million members enrolled in participating HMOs.	Page 177
Total Program Funding (Dollars in thousands)	**FY 2002:** $ 574,645 (Estimate) **FY 2001:** $ 552,605 (Final Appropriation) **FY 2000: $** 475,459 (Actual) **FY 1999:** 10/200 (Actual)		

2.8 Infectious Disease Control

2.8.1 Program Description, Context and Summary of Performance

Once expected to be eliminated as a public health problem, infectious diseases remain the leading cause of death worldwide. In the U.S. and elsewhere, infectious diseases increasingly threaten public health and contribute significantly to the escalating costs of health care. They are a continuing menace to all segments of society, regardless of age, gender, lifestyle, ethnic background and socioeconomic status. Earlier predictions of the elimination of infectious disease did not take into account changes in demographics and human behaviors and the extraordinary ability of microbes to adapt, evolve, and develop resistance to drugs. As early as the 1950s, penicillin began to lose its power to cure infections caused by *Staphylococcus aureas*, a common bacterium that can cause serious illness. In 1957 and 1968, new strains of influenza emerged in China and spread rapidly around the globe, and in the 1970s there was a resurgence of sexually transmitted diseases. Also during the 1970s, several new diseases were identified including Legionnaires' disease, Lyme disease, toxic shock syndrome, and Ebola hemorrhagic fever. Between 1973 and 1995, thirty newly emerging infectious diseases were identified, including hepatitis C virus (HCV) infection, now shown to be the most common blood borne infection in the U.S. The re-emergence of diseases such as TB, malaria, rabies, dengue, and growing drug resistance of many pathogens continued to dramatically change the global and domestic landscape of infectious diseases. By the early 1990s, it had been demonstrated that the threat of infectious diseases was increasing in the United States and elsewhere.

2.8.1a Emerging Infections

In 1994, CDC began working with other federal agencies, state and local health departments, and other partners to strengthen our Nation's capacity to recognize and respond to infectious disease threats through implementation of the CDC plan, Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States. The effort to build U.S. capacity to combat infectious diseases is well underway. However, the fulfillment of CDC's vision of a safer world in the next millennium requires a long-term commitment and sustained effort. The second phase of CDC's effort, Preventing Emerging Infectious Diseases: A Strategy for the 21st Century, has involved taking into account new challenges and building on experience, success, and knowledge gained from the initial plan.

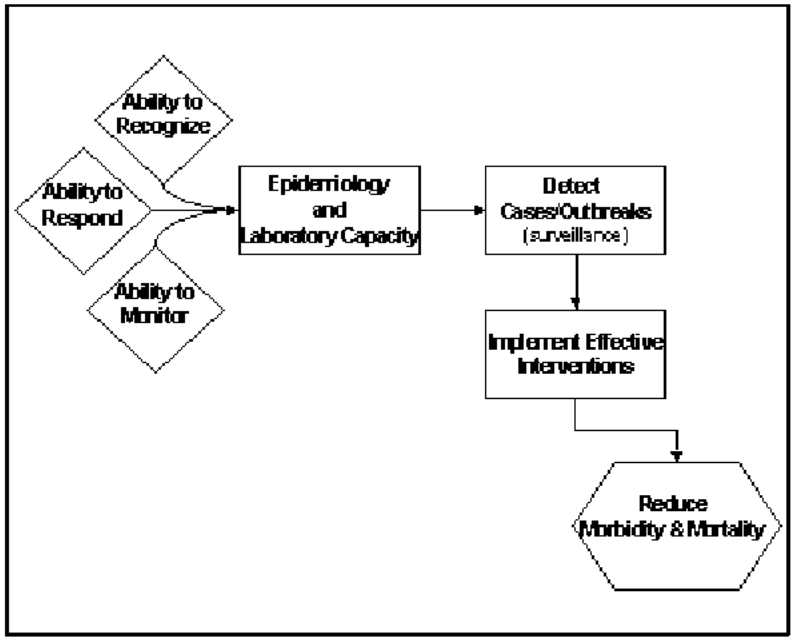
CDC has also undertaken efforts to develop national strategies to address priority disease areas. Recommendations have been published for the prevention and control of hepatitis C virus (HCV) infection and a draft national hepatitis C prevention strategy is being finalized. CDC's goals, to lower the incidence of acute hepatitis C in the United States and reduce liver disease burden from chronic HCV infection, are described in the National Hepatitis C Prevention Strategy. To achieve these goals, CDC has focused on the following components: (1) education directed to health care and public health professionals to improve identification of persons at risk for HCV infection and assure appropriate counseling, medical diagnosis, management, and treatment; education directed to the public and persons at risk for infection about HCV risk factors and the need for testing and medical evaluation; (2) clinical and public health activities directed at identification, counseling, and testing of persons at risk for HCV infection and medical evaluation or referral for those found to be infected; (3) outreach and community-based programs specifically addressing practices that put people at risk for HCV infection, and which identify persons who need to get tested; (4) surveillance to monitor disease trends and to evaluate the effectiveness of prevention activities; and (5) epidemiologic research to better guide prevention efforts.

CDC has a prominent role in maintaining the safety of the nation's food supply. CDC is challenged to build a strong nationwide public health network to conduct foodborne disease surveillance and response; design and implement prevention strategies; support, educate and train the public health workforce; and provide scientifically sound health information to the public. This CDC effort is essential for food safety regulatory agencies, which need and rely on CDC's epidemiologic data, laboratory science, environmental health capability, public health expertise, and links to state and local health and education departments.

An influenza pandemic preparedness plan is under development by an interagency working group. The national plan developed by an interagency task force, A Public Health Action Plan to Combat Antimicrobial Resistance, has recently been finalized. The plan calls for (1) a coordinated national Antimicrobial Resistance (AR) surveillance plan; (2) promoting the appropriate use of antimicrobial drugs and preventing the transmission of infections; (3) research into antimicrobial resistance and mechanisms of transmission; and (4) new product development to prevent, diagnose, and treat infections.

The Emerging Infections performance plan focuses on these priority program areas and measures progress in meeting national recommendations and objectives. The plan consists of two goals. One goal focuses on rebuilding the infectious disease control component of the public health infrastructure by developing and building national epidemiologic and laboratory capacity. Building national capacity will improve our ability to recognize, respond to, and monitor new and re-emerging infectious diseases the key to prevention and control (Figure 2). Success depends on ensuring that national public health capacity exists to quickly recognize and respond to the appearance of new and re-emerging threats, as well as to prevent and control existing infectious disease problems. The other goal highlights the efforts to address the growing problem of antimicrobial resistance as outlined in the national plan, A Public Health Action Plan to Combat Antimicrobial Resistance.

Figure 2: Model for Prevention and Control of Infectious Disease



Partnerships and Links to DHHS Strategic Plan

These performance measures are related to DHHS Goal 1.7: To reduce the incidence and impact of infectious diseases; DHHS Goal 5.1: Improve the capacity of the public health system to identify and respond to threats to the health of the nation's population; and DHHS Goal 6: Strengthen the Nation's health science research enterprise and enhance its productivity. To accomplish these objectives, CDC collaborates with a number of agencies and organizations. Examples of our partners and some selected activities include Council of State and Territorial Epidemiologists (to assist States with pandemic influenza planning activities), Association of Public Health Laboratories (enhances laboratory capacity in the states by providing long-term laboratory training), National Association of County and City Health Officials, National Institutes of Health, Food and Drug Administration (food safety programs), Department of Agriculture (food safety programs), Department of Interior (U.S. Fish and Wildlife), Department of Justice (U.S. Immigrations and Naturalization Service), Department of State, and Department of Treasury (U.S. Customs). To accomplish the HCV prevention objectives, CDC collaborates with several organizations and agencies, including the National Association of State AIDS Directors, National Minority AIDS Council, American Social Health Association, Pacific Islands Health Officers Association, American Liver Foundation, Hepatitis Foundation International, and Indian Health Service.

Performance Summary

CDC's infectious disease goals and performance measures continue to evolve, not only to reflect updated strategies, but also to address the challenges posed by new and resurgent infectious disease threats. The outbreak of West Nile virus in New York, Connecticut and New Jersey is the most recent example of a new or re-emerging infectious disease to threaten public health and challenge the capacity of the public health community to respond to new threats. That outbreak demonstrated the importance of a strong public health infrastructure skilled epidemiologists, effective public health laboratories, and coordinated communications and disease reporting systems at all levels of government in order to mount a rapid and effective response to public health emergencies. The public health infrastructure abroad to support CDC activities is also vitally important. With the ease frequency of modern travel, it is no longer possible to

protect the health of U.S. citizens without addressing infectious disease problems occurring elsewhere in the world. For example, surveillance for antimalarial drug resistance in malarious areas provides essential information needed to protect U.S. travelers going to endemic areas.

For emerging infectious diseases (EID), many of which are new or previously unrecognized, disease-based outcome measures are not applicable. Without knowing what diseases will emerge, baselines do not exist and performance measures of disease incidence cannot be developed. Even when baselines do exist, it is often difficult to link declines in diseases directly to our prevention and control efforts. For instance, the 1998 FoodNet data indicate a decline in several of the major bacterial and parasitic causes of foodborne illness. While these declines may reflect implementation of disease prevention efforts, such as changes in meat and purity processing plants in the United States, and restrictions on food imports, they may also reflect annual fluctuations in the incidence of foodborne illnesses and temporal variations in diagnostic practices.

Another difficulty with using disease-based outcome measures is that improved disease tracking and better reporting systems may actually result in the recognition of more outbreaks and cases. This does not mean there are more cases of the disease occurring; it simply means our eyes, ears, and other tools are better able to find them. Thus, rather than focusing solely on disease-based outcomes, many of the EID performance measures assess CDC's ongoing efforts in strengthening national public health capacity for improved disease surveillance and response through training programs, new laboratory diagnostics, and funding of state and local health departments for infrastructure improvements.

Some important changes have been made to this year's infectious diseases performance plan that should make it easier to follow, as well as a better indicator of performance. Experience over the past two years demonstrated that the two goals on capacity were interchangeable. Thus, performance measures related to building epidemiologic and laboratory capacity are now grouped under one performance goal instead of two. A new goal has been added for reducing the spread of antimicrobial resistance. This goal highlights the efforts to address the growing problem of antimicrobial resistance as outlined in the action plan, *A Public Health Action Plan to Combat Antimicrobial Resistance*. Promoting prudent use of antibiotics is one strategy for reducing antimicrobial resistance, thus measures include reductions in the number of courses of antibiotics for ear infections and the common cold.

The performance measures are grouped differently to provide a better sense of organization and flow. Some performance measures have been added and others refined to better describe their relevance to the goal. Some measures are being dropped–those found to be a poor indicator of performance, for example, measuring the number of extramural research awards; those that cannot be relied on because of circumstances outside CDC's control, such as the number of foodborne disease outbreaks; a few that have been maximized or will have reached the expected level, such as the number of EIP networks and the Group B strep program.

Some of the information needed to assess the FY 2000 targets is not yet available, however, some measures can be addressed. Through FY 2000, 73 scientists will have completed the EID laboratory fellowship program. This fellowship is a training program in infectious disease laboratory methods and practice designed to attract and prepare laboratory scientists for careers in public health. Recruiting and retaining trained health professionals is key to rebuilding our public health infrastructure. Of the 65 fellows who have completed the fellowships as of January 2000, 48% began working in public health laboratories in state health departments or at CDC and 34 % went back to school, primarily M.D. or Ph.D. programs, immediately following the fellowship. The rest accepted employment with non-profit, health-related organizations and private industry, or have accepted other fellowships.

In FY 2000, 43 sites–39 states and 4 local health departments–were funded for the Epidemiology and Laboratory Capacity (ELC) program. The purpose of the ELC program is to assist State and eligible local public health agencies to strengthen the public health infrastructure to address infectious disease threats.

Resources have been used to improve surveillance, develop new and improved diagnostic and subtyping methods, implement electronic disease reporting systems, transfer state-of-the-art technologies into public health laboratories, and train epidemiologists and laboratory workers. ELC funding has been used to hire 160 Full Time Equivalents (FTEs) in funded sites, including 60 epidemiologists and 46 microbiologists. Even though each grant award is modest in size (average $311,000), the ELC program has made a dramatic impact. The infrastructure developed though the ELC program was crucial in the response to the outbreak of West Nile virus in the New York metropolitan area. In addition, through technology transfer, many states now have state-of-the-art molecular laboratory diagnostic tools, including pulsed field gel electrophoresis (PFGE) and polymerase chain reaction (PCR) technology. These tools have been used to identify, investigate, and rapidly implement control measures in hundreds of outbreaks; examples in 1999 include, *E. coli* O157:H7 at an upstate New York county fair linked to contaminated water; multi-state outbreaks of *Salmonella* associated with alfalfa sprouts; and multi-state outbreaks of *Listeria* associated with hot dogs.

CDC has made substantial progress in improving food safety through collaborations with federal, state, and local government partners and with public and private sector partners. CDC led the development and implementation of foodborne disease trend data for targeting of resources and improving prevention methods; and the PulseNet laboratory DNA fingerprinting network (in 48 public health laboratories) that provides for early detection of foodborne disease outbreaks within and between states. These programs and other CDC efforts have strengthened and expanded the early warning system for foodborne illness; improved and expanded pathogen detection methods; improved prevention techniques to avoid, reduce, or eliminate pathogens; and improved outbreak containment. CDC, in collaboration with FDA and USDA, has designed training and educational materials and modules for public health and health care professionals; joined forces with government, industry, and consumer partners to conduct a broad-based food safety education campaign (Fight BAC!™); and launched a national partnership for school-focused foodborne illness prevention.

In FY 2000, using FoodNet and other data, CDC updated estimates of the burden of foodborne disease in the United States; each year there are 76 million cases of foodborne illnesses resulting in 325,000 hospitalizations and 5,000 deaths. Also, FY 1999 FoodNet data showed that rates of *Campylobacter* (26%), *Shigella* (44%), *E. coli* (22%) and *Salmonella enteriditis* (48%) have declined; these findings led to new interagency efforts in research and surveillance to document the effectiveness of new food safety control measures.

CDC has made substantial progress toward reducing perinatal group B streptococcal disease, the most common cause of severe infections in newborns. Providers and obstetric departments have quickly adopted recommended prevention strategies, resulting in a decline in disease that is more rapid than expected. CDC worked with the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics to develop guidelines and information for practitioners on the best methods for preventing group B streptococcal disease. Surveys have shown that the prevention recommendations have been widely adopted. CDC's Active Bacterial Core Surveillance (ABCs) is tracking group B streptococcal disease in nine states in areas with a total population of 28.3 million persons. According to ABCs data, neonatal group B streptococcal infections have declined 70% since 1995, the year before the prevention recommendations were published. To improve prevention efforts, CDC staff are working with ABCs personnel to assess missed opportunities for prevention and will be meeting with representatives from the American College of Obstetrics and Gynecology and the American Academy of Pediatrics to review the 1996 prevention guidelines.

Other target measures, such as reduction of central line-associated bloodstream infections, were revised because the original targets had already been met due to increased use of benchmark data to identify problems. This allowed prompt use of intervention aimed at reducing the risk of bloodstream infections. The target number of domestic and international sites for influenza surveillance was exceeded because of

diligent recruitment for the U.S. Sentinel Physicians Surveillance and consistent follow-up from the CDC influenza program staff.

2.8.2a Goal-by-Goal Presentation by Budget

Performance Goal: Strengthen domestic and global epidemiologic and laboratory capacity for surveillance and response to infectious disease.

Performance Measures	Targets	Actual Performance	Ref.
Domestic and Global Public Health Capacity			
Public health microbiology fellows will be trained and available for employment in local, state, and federal public health laboratories.	**Fellows Trained:** **FY 02:** 125. **FY 01:** 100. **FY 00:** 70. **FY 99:** 40. Overall target: On-going increase in fellows trained.	**Fellows Trained:** **FY 02:** **FY 01:** **FY 00:** 73. **FY 99:** 40. **FY 97:** 13(baseline).	Page 190
The Emerging Infections Program (EIP), a network of regional population-based programs, will be established to conduct active surveillance, engage in applied epidemiologic and laboratory research and pilot and evaluate prevention and intervention measures.	**FY 01:** 9 EIP sites. **FY 00:** 9 EIP sites. **FY 99:** 8 EIP sites.	**FY 01:** **FY 00:** 9 EIP sites. **FY 99:** 7 EIP sites.	Page 190

Performance Measures	Targets	Actual Performance	Ref.
Extramural domestic and global surveillance networks will monitor conditions including antimicrobial resistance, threats from transfusion of blood and blood products, infectious diseases among travelers and immunosuppressed and underserved populations.	**Extramural Networks:** **FY 02:** 7. **FY 01:** 6. **FY 00:** 5. **FY 99:** 4. Overall target: 10 networks.	**Extramural Networks:** **FY 02:** **FY 01:** **FY 00:** 6. **FY 99:** 4. **FY 98:** 3. **FY 97:** 3 (baseline).	Page 190
State/local health departments will have increased epidemiologic and laboratory capacity (ELC) for surveillance and response to infectious disease threats.	**Health Departments:** **FY 02:** 58. **FY 01:** 53. **FY 00:** 43. **FY 99:** 33. Overall target: 55-60 health departments.	**Health Departments** **FY 02:** **FY 01:** **FY 00:** 43. **FY 99:** 33. **FY 98:** 30 (baseline).	Page 190
Extramural awards will be provided to conduct enhanced research investigations to assist in development and improvement of diagnostic tests for use in areas such as antimicrobial resistance, sexually transmitted diseases, malaria, Lyme disease, healthcare-associated infections, and blood safety.	**Extramural Awards:** **FY 01:** 45. **FY 00:** 22. **FY 99:** 22.	**Extramural Awards:** **FY 01:** **FY 00:** 4/2001. **FY 99:** 22. **FY 97:** 17.	Page 190
Hepatitis C, Chronic Liver Disease and Viral Hepatitis			
Support for coordinators to initiate hepatitis prevention and control activities will be provided to State/local health departments.	**Health Departments:** **FY 02:** 30. **FY 01:** 25. **FY 00:** 9. Overall Target: 65 health departments.	**Health Departments:** **FY 02:** **FY 01:** **FY 00:** 15. **FY 99:** 0 health departments.	Page 190

Performance Measure	Target	Actual Target	Ref.
Support will be provided to State/local health departments to assess the effectiveness of integration of HCV counseling, testing, and referral programs to established public health programs.	**Health Departments:** **FY 01:** 15. **FY 00:** 15. Overall Target: 20 health departments.	**Health Departments:** **FY 01:** **FY 00:** 12. **FY 99:** 0 (baseline).	Page 190
Sentinel surveillance systems for chronic Hepatitis C Virus (HCV) will be established to monitor national trends in incidence, risk factors for infection, and outcomes of disease.	**States with Sentinel Surveillance Systems:** **FY 02:** 5. **FY 01:** 5. **FY 00:** 3. **FY 99:** 1 Sentinel surveillance system for chronic HCV will be developed and pilot tested. Overall Target: 10 states with sentinel surveillance systems.	**States with Sentinel Surveillance Systems:** **FY 02:** **FY 01:** **FY 00:** 5. **FY 99:** 2 pilot tests of the sentinel surveillance system were conducted. **FY 98:** 0 Surveillance Systems (baseline).	Page 190
	Influenza		
Monitoring influenza viruses will be conducted in domestic and global sites to enhance early detection of influenza viruses with pandemic potential and improve vaccine decision-making.	**Domestic and Global Sites:** **FY 02:** 550. **FY 01:** 514. **FY 00:** 510. Overall Target: 1 site per 250,000 population domestically and increasing numbers internationally.	**Domestic and Global Sites:** **FY 02:** **FY 01:** **FY 00:** 514 sites. **FY 99:** 410 sites. **FY 96:** 0 sites.	Page 190
	Food Safety		
Large or unusual outbreaks of diarrheal and/or foodborne illness will be detected and investigated.	**Outbreaks Investigated:** **FY 01:** 26. **FY 00:** 26. **FY 99:** 23.	**Outbreaks Investigated:** **FY 01:** **FY 00:** 4/2001. **FY 99:** 25. **FY 98:** 15.	Page 190

Performance Measure	Target	Actual Target	Ref.
The proportion of reported foodborne outbreak investigations in which the causative organism or toxin is identified.	**Causative Organism Identified:** **FY 02:** 57%. **FY 01:** 55%. **FY 00:** 50%. **FY 99:** 45%. Overall Target: On-going--dependant on development of new lab technologies.	**Causative Organism Identified:** **FY 02:** **FY 01:** **FY 00:** 4/2001. **FY 99:** 48% identified causative organism. **FY 98:** 40% Identified causative organism.	Page 190
The proportion of reported foodborne outbreaks in which the food that caused the outbreak is identified.	**Causative Food Identified in:** **FY 01**: 55% of outbreaks. **FY 00:** Greater than 50% of outbreaks. **FY 99:** 50% of outbreaks where causative food is identified.	**Causative Food Identified in:** **FY 01:** **FY 00:** 4/2001. **FY 99:** 50% of outbreaks where causative food is identified. **FY 98:** 45% of outbreaks where causative food is identified.	Page 190
Expand the number of public health labs capable of accessing PulseNet to build subtyping capacity and rapid exchange of foodborne illness data for early identification of and response to outbreaks within and between states. Continued...	***E. Coli* 0157:H7:** **FY 02:** 45 labs. **FY 01:** 45 labs. **FY 00:** 40 labs. **FY 99:** 29 labs. ***Salmonella Typhimurium:*** **FY 02:** 45 labs. **FY 01:** 45 labs. **FY 00:** 40 labs. **FY 99:** 7 labs. Continued...	***E. Coli* 0157:H7:** **FY 02:** **FY 01:** 4/2001. **FY 00:** 40 labs. **FY 99:** 29 labs. **FY 97:** 0 (baseline). ***Salmonella Typhimurium:*** **FY 02:** **FY 01:** **FY 00:** 40 labs. **FY 99:** 7 labs. **FY 97:** 0 labs (baseline). Continued...	Page 190

Performance Measure	Target	Actual Target	Ref.
...continued. Expand the number of public health labs capable of accessing PulseNet to build subtyping capacity and rapid exchange of foodborne illness data for early identification of and response to outbreaks within and between states.	...continued. ***Listeria monocytogenes*:** **FY 02:** 30 labs. **FY 01:** 30 labs. **FY 00:** 20 labs. **FY 99:** 7 labs. ***Shigella sonnei*:** **FY 02:** 15 labs. Overall Target: 56 public health departments (number of pathogens that are added may increase as new emerging pathogens are identified).	...continued. ***Listeria monocytogenes*:** **FY 02:** **FY 01:** **FY 00:** 20 labs. **FY 99:** 7 labs. **FY 97:** 0 labs (baseline). ***Shigella sonnei*:** **FY 02:** **FY 01:** **FY 00:** 7 labs. **FY 97:** 0 labs (baseline).	Page 190
Enhance FoodNet, a foodborne diseases active surveillance network, by increasing the number of pathogens and syndromes under active surveillance to identify trends in foodborne illness.	**Pathogens or Syndromes:** **FY 02:** 11. **FY 01:** 11. **FY 00:** 10. **FY 99:** 8. Overall Target: On-going. Dependent on identification of new pathogens and syndromes.	**Pathogens or Syndromes:** **FY 02:** **FY 01:** 4/2001. **FY 00:** 10. **FY 99:** 8. **FY 97:** 7.	Page 190

Performance Goal: Reduce the spread of antimicrobial resistance.

Performance Measure	Target	Actual Performance	Ref.
Provide support for state/local health departments and hospitals in the surveillance, prevention, and control of antimicrobial resistance.	**Sites:** **FY 01:** 14. **FY 00:** 14.	**Sites:** **FY 01:** **FY 00:** 4/2001. **FY 99:** 0.	Page 190

Performance Measure	Target	Actual Performance	Ref.
The rate of central line associated bloodstream infections in adults in intensive care unit patients will be reduced as measured through the National Nosocomial Infections Surveillance (NNIS) System.	**Rate of Infections:** **FY 02:** 3.80. **FY 01:** 3.86. **FY 00:** 4.4. **FY 99:** 5.2. Overall Target: 3.80 infections.	**Rate of Infections:** **FY 02:** **FY 01:** **FY 00:** 3.92. **FY 99:** 4.4. **FY 98:** 5.3.	Page 190
Diminish the rapid rise in the proportion of enterococci resistant to vancomycin (VRE rate) among pathogens associated with nosocomial infections in intensive care unit patients.	**Increase in resistant strains:** **FY 02:** 26.0%. **FY 01:** 27.2% . **FY 00:** 25.2%. **FY 99:** 40.0%. Overall Target: 26% increase.	**Increase in resistant strains:** **FY 02:** **FY 01:** **FY 00:** 25.0%. **FY 99:** 40.9%. Five year historical mean 47%.	Page 190
Establish a surveillance system to collect data on antimalarial drug resistance in sub-Saharan African countries.	**FY 01:** 54 sub-Saharan African countries. **FY 00:** 25 of sub-Saharan African countries included in the surveillance system. Overall Target: 54 sub-Saharan countries.	**FY 01:** **FY 00:** 54 sub-Saharan African countries included in the surveillance system. **FY 99:** No surveillance system in sub-Saharan African countries for collecting data on antimalarial drug resistance.	Page 190
Reduce the number of courses of antibiotics for ear infections for children under the age of 5 years.	**Antibiotic courses per 100 children:** **FY 02:** 102 . **FY 01:** 104. **FY 00:** 106. Overall Target: 88 antibiotic courses per 100 children.	**Antibiotic courses per 100 children:** **FY 02:** **FY 01:** **FY 00:** 4/2001. **FY 97:** 108.	Page 190

Performance Measure	Target	Actual Performance	Ref.
Reduce the number of courses of antibiotics prescribed for the sole diagnosis of the common cold.	**Antibiotic courses prescribed per 100,000 population:** **FY 02:** 2,144. **FY 01:** 2,281. **FY 00:** 2,408. Overall target: 1,268 antibiotic courses prescribed per 100,000 population.	**Antibiotic courses prescribed per 100,000 population:** **FY 02:** **FY 01:** **FY 00:** 4/2001. **FY 97:** 2,535 (baseline).	Page 190
Reduce the incidence of perinatal Group B streptococcal infections.	**Perinatal Group B streptococcal infections per 1,000 live births:** **FY 01:** 0.3. **FY 00:** 0.4. **FY 99:** 0.9. Overall Target: 0.3 perinatal Group B streptococcal infections per 1,000 live births.	**Perinatal Group B streptococcal infections per 1,000 live births:** **FY 01:** **FY 00:** 9/2001. **FY 99:** 0.4. **FY 95:** 1.3.	Page 190
Total Program Funding (Dollars in Thousands)	**FY 2002:** $331,518 **FY 2001:** $317,674 **FY 2000:** $253,697 **FY 1999:** 10/2001	(Estimate) (Final Appropriation) (Actual) (Actual)	

Verification/Validation of Performance Measures: Successful accomplishment of these objectives will, in part, be verified using data submitted from funded states. Performance, in these instances, will be verified through on-site technical assistance and periodic visits and progress reviews. Other data are monitored using published and unpublished studies and recommendations. Additional systems used for verification included: 1) Hepatitis C Virus County Surveillance Project; 2) PulseNet and FoodNet; 3) U.S. Influenza Physicians Surveillance Network; 4) the Foodborne Outbreak Reporting System, and 5) Active Bacterial Core Surveillance (ABCs). The following systems referenced in Appendix A.2 are also used for data verification and validation: 1) National Nosocomial Surveillance System (NNIS); 2) National Electronic Telecommunication System for Surveillance (NETSS); and 3) Public Health Laboratory Information System (PHLIS).

2.9 Injury Prevention and Control

2.9.1 Program Description, Context and Summary of Performance

Injury, the leading cause of death for Americans ages 1 to 44 years, is largely preventable. CDC leads federal efforts to prevent and control injuries with a program that addresses the main causes of death and disability from injury: fires and burns; poisoning; drowning; violence, including homicide and suicide; motor vehicle crashes; and lack of use of bicycle helmet, seat belts, and child restraint seats. Injury has a disproportionate impact on children, youth, and young adults. Every day 60 children die from injury, almost 3 children every hour. Each year over 150,000 Americans die from injuries, and 1 in 3 persons suffers a nonfatal injury. Injuries, one of our most expensive health problems, cost $224 billion per year as a total lifetime cost of injuries sustained. While the CDC and our public and private partners have made tremendous progress in injury prevention and control during the past several years, examples of the magnitude of the injury problem are highlighted below:

- Home fires and falls among older persons cause thousands of deaths and injuries each year and result in high medical costs and property losses;
- Violence continues to result in staggering numbers of lives lost, and frequently this is violence among intimate partners -- each year over 30% of women murdered in the U.S. are killed by a spouse or ex-spouse;
- The rates of homicide and suicide for young Americans, particularly men, are alarmingly higher than for any other Western industrialized nation;
- An estimated 2 million Americans suffer a traumatic brain injury (TBI) each year, of which about 50,000 die and another 50,000 to 70,000 are disabled;
- Approximately 4 million poisonings occur each year costing the health care system approximately $3 billion/year; and
- Each year about 153,000 children receive treatment in hospital emergency departments for bicycle-related head injuries.

Through the National Center for Injury Prevention and Control, CDC provides national leadership for designing programs to prevent premature death and disability and reduce human suffering and medical costs caused by injuries. CDC accomplishes its mission through: extramural and intramural research; conducting surveillance; developing, evaluating, and implementing prevention programs; assisting state and local health jurisdictions in their efforts to reduce injuries; and conducting prevention activities in partnership with other federal and private-sector agencies. Evaluation of intervention programs is a key component of CDC's overall strategy to discover what works and determine how to deliver programs to the American people. In January 1999, the Institute of Medicine published a report titled, *Reducing the Burden of Injury: Advancing Prevention and Treatment.* This report encourages expansion of CDC's work in all these areas and provides specific recommendations, which CDC is considering as future plans are developed.

CDC continues to discover and deliver proven interventions. Some of our recent activities and accomplishments include:

Smoke alarm installation and education programs in nineteen states. During the project period, over 50,000 long life, lithium-powered smoke alarms were distributed and/or installed.
Bicycle safety programs in five states aimed at increasing bicycle helmet use among riders of all ages. These programs have resulted in measurable increases in helmet use.
Development of, "***The Best Practices to Prevent Youth Violence: A Sourcebook for Community Action.***" The ***Sourcebook*** is based on the input of experts convened by CDC to review and analyze

the results of research, including CDC findings, in order to identify "Best Practices" for youth violence prevention.

Establishment of the first suicide prevention research center in addition to other research efforts to discover what puts people at risk for suicide and how to prevent it. CDC also participated in the development of the Surgeon General's 1999 *Call to Action to Prevent Suicide*, which recommends a three part strategy, "Awareness, Intervention, and Methodology (AIM)," for moving the nation's suicide prevention efforts forward.

Development of a fifteen-state TBI surveillance system and two State TBI Registries. Data from these surveillance systems will enable CDC to estimate the magnitude and severity of TBI nationally and to assist states in developing TBI prevention programs.

Development of uniform data elements for emergency department records - As electronic patient record keeping enters into the mainstream of ED practice, we will continue to work with States, hospitals, and others to improve structured data entry and health data standards applicable to each data element, safeguards to protect the privacy and confidentiality of personally identifiable data, and the specific needs of surveillance systems at the local, state, and national levels.

Improving institutional and community living environments for elderly citizens as a means of reducing the risks and consequences of falls. In 1998, CDC established the National Resource Center on Aging and Injury. In 1999, *Remembering When,* A Fire and Falls Prevention Program for Older Adults was completed and pilot-tested in Mississippi, Arkansas, and Alaska, as well as the cities of Atlanta and Cleveland. CDC has also developed a Tool Kit to Prevent Senior Falls, to provide health professionals, including state and local health departments, state and local agencies on aging, health maintenance organizations, and other organizations and service providers with current technical information and materials about falls and fall-related injuries that can be incorporated into new of existing programs and activities to reduce falls among older adults. The tool kit also contains a newly developed, scientifically based fall prevention brochure and a home safety checklist intended for the general public.

Focus of the FY 2002 Performance Plan

The performance measures for injury prevention and control best represent NCIPC's mission to provide leadership in preventing and controlling injuries through research, surveillance, implementation of programs, and communication. Priority areas for the FY 2002 Performance Plan include:

- Youth violence prevention
- Intimate partner violence prevention
- Bicycle helmet usage and head injury prevention
- Fire-related injury prevention
- Fall-related injury prevention among the elderly
- Motor vehicle-related injuries and deaths among the elderly
- Injury Prevention and Control Research
- Data Warehousing and Mining
- Electronic Emergency Department Public Health Reporting

Links to the DHHS Strategic Plan:

Each of the NCIPC performance objectives and measures are related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans.

2.9.1a Youth Violence Prevention

Violence is a public health problem because of its tremendous impact on the health and well-being of our youth. In 1997, 6,146 young people 15-24 years old were victims of homicide. This amounts to an average of 17 youth homicide victims per day in the US. As the lead agency in injury control, CDC plays a key role in coordinating activities and programs in the Public Health Service to prevent youth violence through it's focus on intervention and evaluation research. Over the last 15 years, CDC has used science to understand the problem of violence in America and to determine what works to prevent it. The public health approach to violence has four major components: 1) description of the problem, 2) identification of risk and protective factors, 3) evaluation of interventions and programs designed to reduce violence, and 4) implementation of promising programs at the community level.

Poverty, discrimination, and lack of opportunities for education and employment are important risk factors for violence and must be addressed as part of any comprehensive solution to youth violence. Strategies for reducing violence should also begin early in life, before young people adopt violent beliefs and behavioral patterns. To determine how to alter these risks and prevent young people from becoming victims or perpetrators of violent behavior, in 1992 CDC began funding projects to evaluate effective interventions for preventing and reducing aggressive behavior among youth. The primary goal of these projects is to determine which interventions are effective in preventing and reducing aggressive and violent behavior. The majority of the projects emphasize primary prevention and are cooperative efforts among schools, health departments and community partners.

Several projects have been funded across the country which have looked at a broad range of promising interventions including peer mediation, conflict resolution training, mentoring, role playing, and efforts to improve parenting skills. These interventions will serve as the framework for developing performance measures aimed at reducing the incidence of youth violence.

Performance Summary

Intervention and evaluation phases of several youth violence prevention projects have ended, final reports are being received, and an analysis of he outcomes will take place in FY 2000. In a baseline measure at the beginning of one of the projects to prevent violence among middle-school students, 50% of the students reported incidents of physical fighting. One target was to achieve a 30% reduction in reported incidents of physical fighting. Final reports from this round of projects are being received and will be analyzed in FY 2000. Other accomplishments include:

- CDC has developed a source book on the Best Practices for implementing prevention programs that hold the most promise for reducing aggression and violence among youths. This source book will be available early in 2000. Four strategies are included in the source book: social cognitive programs, mentoring programs, parent/family intervention programs, and nurse home visitation. The source book builds on lessons learned from the initial evaluation projects funded by CDC and draws upon the expertise of over 100 of the nation's leading scientists and practitioners, and the scientific literature on youth violence prevention.

- In light of the recent school shootings, CDC (with the Department of Education (DOE) and the Department of Justice (DOJ)), has conducted a second national study to determine whether there has been a significant increase in school-associated violent deaths since 1994. Once data analysis is completed we will have continuous data from 1992-1998. The first such national study, conducted jointly by CDC and DOE, examined the period 1992-1994. Of the 15 school-associated violent deaths examined in that study, student in secondary schools, students of minority racial and ethnic background, and student in urban school districts had higher levels of risk, and the deaths occurred in communities of all sizes in 25 different states.

- Building on the foundation of earlier projects to evaluate promising intervention, CDC has awarded four cooperative agreements to develop, implement, and evaluate a common violence prevention program in middle schools. Approximately 9,000 middle school students will be involved in this evaluation project, making it one of the largest efforts to date to assess the effectiveness of school-based violence prevention among this age group. CDC is supporting the replication and evaluation of promising prevention programs targeting children ages 12-18 in collaboration with DOJ and the Center for the Study and Prevention of Violence at the University of Colorado.

- To assist researchers and prevention specialists interested in conducting risk and protective factor research or in evaluating youth violence prevention programs, CDC has published Measuring Violence-Related Attitudes, Beliefs, and Behaviors: A Compendium of Assessment Tools. The compendium includes questions, scales, and instruments for measuring attitudinal, psycho-social, behavioral, and environmental factors related to violence.

- During FY 2000, CDC funded 10 National Centers of Excellence on Youth Violence and a National Youth Violence Prevention Resource Center. The Centers of Excellence will serve as national models for the prevention of youth violence. The Centers will support development and use of effective interventions, promote interdisciplinary research, foster collaboration between researchers and communities, and empower communities to address the problem of youth violence that will be available on a toll-free number in English and Spanish, on the Internet, and be linked to private and Federal resources.

2.9.2a Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence youth violence.

Performance Measures	Targets	Actual Performance	Ref.
Reduce the number of students reporting incidents of physical fighting among program participants in a CDC-funded youth violence project.	**FY 00:** 30% of students report being involved in a physical fight.	**FY 00:** Achieved. **FY 96:** 30% reduction in physical fighting was reported in the initial phase of the project. **FY 94:** 50% of students report being involved in a physical fight (baseline).	Page 201

Performance Measure	Target	Actual Performance	Ref.
Develop best practices protocols for implementation and evaluation of youth violence prevention programs in 1999.	**FY 02:** Develop capacity for technical assistance in implementing the best practices Sourcebook nationwide through CDC's National Youth Violence Prevention Research Center. **FY 01:** Provide technical assistance to at least 5 communities in implementing Best Practices. **FY 00:** Disseminate Best Practices protocols to at least one target audience during FY 2000. **FY 99:** Develop best practices protocols for implementation and evaluation of youth violence prevention programs in 1999.	**FY 02:** **FY 01:** **FY 00:** Publication completed; distribution in FY 01. **FY 99:** Protocols have been developed and compiled into a Sourcebook of Best Practices.	Page 201
Increase the number of regional best practices workshops and disseminate results of the workshops.	**FY 02:** Disseminate workshop results. **FY 01:** 8 workshops. **FY 00:** Develop and test new mechanisms for disseminating Best Practices, such as a website.	**FY 02:** **FY 01:** **FY 00:** Website launched October 2000. **FY 97:** 0 Workshops.	Page 201

Verification/Validation of Performance Measures: The *Behavioral Frequency Scales* will be used to verify and validate the first performance measure. Programmatic oversight will be used to verify and validate the remaining performance measures.

Behavioral Frequency Scales: This instrument is used to measure aggressive and delinquent behavior in among program participants in CDC-funded youth violence prevention programs. The inventory includes scales that assess the 30-day frequency of specific delinquent behavior (10 items), violent behaviors (5 items), gateway drug use (6 items), other drug use (4 items). An additional 16 items assess frequency of use for other drugs, concerns about safety, the use of conflict-resolution skills, and the use of the peer mediators. Reliability ranges from .64 to .87. (The Center for the Study and Prevention of Violence, Boulder, Colorado - Peter Tolan & Nancy Guerra).

2.9.1b Violence Against Women

Nearly 2 million American women experienced domestic or sexual violence in 1996: 4,581,714 physical assaults against women were committed by partners and 453, 137 rapes occurred during the preceding 12 months. Over 4,200 women were murdered by someone they knew, and half of those murders were committed by intimate partners. Strong networks of state and local groups have laid the foundation for delivering services and advocating for survivors, with limited Federal support. The Violence Against Women Act of 1995 increased Federal funding and clearly defined the government's role to support services and provide knowledge for preventing and treating violence against women.

The problem is difficult to study because there are many barriers to disclosure. Consequently, much remains unknown about the factors that increase or decrease the likelihood that men will behave violently towards women, the factors that endanger women or protect them from violence, and the physical and emotional consequences of such violence for women and their children. Greater knowledge of modifiable factors that are causally related to intimate partner violence, methods of violence, and consequences of such violence will lead to the development of new prevention strategies.

In 1994, the CDC began funding projects to determine how effective specific prevention or intervention programs are in preventing intimate partner violence and sexual assault and how to effectively combine specific prevention or intervention programs to prevent intimate partner violence and sexual assault. The expansion of this program will lead to greater knowledge of modifiable risk factors and consequences associated with the development of effective prevention and intervention strategies for intimate partner violence and sexual assault. Our long-term goal is to, "Reduce the incidence of violence against women." However, this goal may take many years to achieve. In the interim, we know that we need to put into place an ongoing system to monitor the problem, improve the level and scope of prevention and intervention services, provide for evaluating what works and communicating what we know to violence against women service providers, and gain a greater understanding of the social norms that allow violence against women. Our short-term goal is to put surveillance, communications, and evaluation/feedback systems into place that will allow us to reduce the incidence of violence against women over time.

Performance Summary

Projects in three state health departments are progressing well in collecting data on family and intimate violence and in implementing and evaluating interventions; four multifaceted community-based projects are identifying successful methods for delivering family and intimate violence interventions at the community level and determining if these programs can reduce the violence; and fourteen projects are developing and evaluating coordinated community responses and the primary prevention of family and intimate violence.

Other activities and accomplishments include:

- In October 1999, CDC published Intimate Partner Violence Surveillance: Uniform Definitions and Recommended Data Elements, Version 1.0 to improve the quality of data about violence against women. The document summarizes recommended uniform definitions and data elements for intimate partner violence surveillance, and is intended for voluntary use by individuals and organizations interested in gathering such data.
- The CDC Working Group on Violence and Reproductive Health organized the National Conference on Violence and Reproductive Health: Science, Prevention and Action, held June, 1999. The goal of the conference was to increase awareness and understanding of the relationship between violence against women and reproductive health and to lay the groundwork for future activities in science, program and policy development.

- In October 1999, Kentucky and Oklahoma were funded to develop intimate partner violence surveillance systems. These two states in addition to three others initially funded in 1994 are pilot testing the uniform Definitions and Recommended Data Elements.
- In FY 1999, CDC funded six projects (three new and three continuations) to evaluate a community-coordinated response to intimate partner violence. All projects will have a comparison community and will conduct cross-community comparisons.
- CDC funded 8 community-based primary prevention projects for three years in FY 1998 to develop, implement, and evaluate primary prevention programs in family and intimate violence.
- In response to many requests by hospitals and other organizations, CDC has developed a framework to evaluate health care provider training programs.
- CDC has provided support and technical assistance for the development, implementation, and evaluation of a training program for health workers in California who provide outreach to Mexican and Mexican-American migrant and seasonal farm workers. This project has won two awards: The Marshall Award, and the President's Award for Excellence. CDC currently is providing support and technical assistance to replicate and evaluate the program in Wisconsin and Texas.
- CDC funded the Pennsylvania Coalition Against Domestic Violence to further develop, expand, and evaluate the Violence Against Women Electronic Network. The funding creates the opportunity to provide state domestic violence and sexual assault coalitions, and allied organizations with more immediate access to information and with a more efficient method of communicating about prevention and intervention initiatives.
- CDC is funding The Violence Against Women Prevention Research Center, which is composed of core research faculty from the Medical University of South Carolina, the University of Missouri at St. Louis, and Wellesley College to:
  - –Overcome barriers to collaboration between researchers, victim advocates, public health, criminal justice, and practitioners and foster interdisciplinary prevention research;
  - –Develop and test new preventive interventions;
  - –Train and assist those involved in violence against women prevention research;
  - –Disseminate the best prevention research; and
  - –Make special outreach efforts to attract and train violence against women researchers who are racial and ethnic minorities.
- A case control study on suicide attempts was conducted at a large urban hospital to investigate the links between suicide attempts and intimate partner violence. The researchers found that there was a strong connection between intimate partner violence and suicidal behavior in African American women.
- Additional funding has been provided to conduct a prospective, randomized controlled trial to develop interventions for suicidal, battered women to reduce the morbidity and mortality associated with both intimate partner violence and suicide.
- A community-based domestic violence intervention with Latino families is a longitudinal in-depth study of the impact of violence on abused Latinas, their male batterers, and their children. The study will examine the ways in which historical, social, economic, philosophical and spiritual aspects of Latino culture can be used to design and implement a comprehensive family intervention that encompasses both primary and secondary prevention strategies.
- In October 1999, CDC convened a meeting to develop a plan for CDC's future role in preventing child abuse and neglect. Participants at this meeting consisted of researchers, service providers, educators, representatives of other federal agencies, and other professionals who are active in the field of preventing child abuse and neglect.
- In FY 2000, CDC used increases from Congress to bolster services for women who are victims of violence and for responding to the need for prevention and early intervention. CDC funded 10 cooperative agreements to support demonstration projects for early intervention and prevention of sexual violence and intimate partner violence among racial and ethnic minority populations.

2.9.2b Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence of violence against women.

Performance Measures	Targets	Actual Performance	Ref.
CDC will establish a biannual survey of the incidence and prevalence of violence against women by the year 2001.	**FY 02:** Conduct survey. **FY 01:** Begin development of a survey instrument. **FY 00:** Establish a committee to begin development of a survey instrument.	**FY 02:** **FY 01:** **FY 00:** Committee has been established. **FY 99:** No ongoing biannual survey in existence.	Page 201
Establish innovative programs to address prevention of violence against women.	**FY 02:** Projects ongoing: no milestones to report. **FY 01:** Develop/publish progress report on funded projects with a long-term goal of developing recommendations for key components of successful programs by the year 2005. **FY 00:** Implement and begin evaluation of 2 innovative community-based programs to address violence against women: (1) Community -coordinated response to intimate partner violence and (2) community-based primary prevention programs.	**FY 02:** **FY 01:** **FY 00:** 10 projects were funded in September 2000 to support two community-based programs: (1) Community -coordinated response to intimate partner violence; and (2) community-based primary prevention programs. **FY 99:** No evaluations done to date.	Page 201

Performance Measures	Targets	Actual Performance	Ref.
Establish a research program that addresses the understudied aspects of violence against women.	**FY 02:** Ongoing study projects. **FY 01:** Address at least 2 understudied aspects of violence against women identified in the research plan with a long-term goal of translating findings from the research funded for use at the community or program level. **FY 00:** Develop a violence against women research plan and identify potential academic institutions that are committed to conducting violence against women research.	**FY 02:** **FY 01:** **FY 00:** Priorities have been identified; RFP has been developed; applications were reviewed and funding decisions were made at the end of 9/2000. **FY 99:** No research plan in place.	Page 201
Establish at least one system for collecting Intimate Partner Violence (IPV) surveillance data representative of an entire state, by the year 2000. Analyze the surveillance data in 2001 and beyond.	**FY 02:** Projects on-going. **FY 01:** Develop and pilot the surveillance system. **FY 00:** Identify data sources at the state level.	**FY 02:** **FY 01:** **FY 00:** Three additional states were funded in September 2000. **FY 99:** Three states are funded to explore different ways to collect this data.	Page 201

Performance Measures	Targets	Actual Performance	Ref.
Increase (a) by 5% the number of coalition members' working partnerships, or (b) by 15% the community's knowledge of resources, or (c) by 10% the number of calls to agencies from communities with coordinated community responses on intimate partner violence prevention intervention in at least two communities by the year 2000.	**FY 02:** Continue at FY 01 level. **FY 01:** Increase at least two of the three options. **FY 00:** Increase at least one of the three options.	**FY 02:** **FY 01:** **FY 00:** Preliminary data being processed and analyzed. **FY 99:** Data received in March 2000 and will be process and analyzed in FY 00.	Page 201

Verification/Validation of Performance Measure: Programmatic oversight will be used to verify and validate performance measures.

2.9.1c Rape Prevention and Education Grants

In a recent National Violence Against Women Survey CDC found that 453,137 rapes occurred during the preceding 12 months; over half of the women who reported rape in their lifetime said they were under 17 when the first rape occurred; and nearly half of these child-rapes occurred to girls under 12 years of age. CDC continues to address this problem by supporting every State and territory through the rape prevention and education grant program and by conducting research and other activities to improve states' ability to prevent sexual violence.

Previously funded from the Violent Crime Reduction Trust Fund via the Preventive Health and Health Services Block Grant, this $45 million grant program is being modified to comply with new requirements of the Victims of Trafficking and Violence Protection Act of 2000 (PL 106-386, October 28, 2000), which requires CDC to provide resources and assistance to states for rape prevention and education programs conducted by rape crisis centers, State sexual assault coalitions, and other public and private nonprofit entities for:

- educational seminars.
- operation of hotlines.
- training programs for professionals.
- preparation of informational material.
- education and training programs for students and campus personnel designed to reduce the incidence of sexual assault at colleges and universities.
- education and training to increase awareness about drugs to facilitate rapes or sexual assaults.
- other efforts to increase awareness about, or to help prevent, sexual assault, including efforts to increase awareness in underserved communities and awareness among individuals with disabilities.

CDC assists state and coalition staff through training opportunities and the National Sexual Violence Resource Center.

The Rape Prevention and Education (RP&E) Program provides funding to 59 grantees to support primary prevention activities and health services that address sexual assault and rape prevention and education in local communities. Grantees comprise all 50 states, the District of Columbia, and 8 Pacific Island territories.

Links to DHHS Healthy People 2010

This program activity relates to the following Healthy People 2010 Goals:
15-35 Reduce the annual rate of rape or attempted rape to 0.7 rapes or attempted rapes per 1,000 persons; and
15-36 Reduce sexual assault other than rape to 0.2 sexual assaults other than rape per 1,000 persons aged 12 years and older.

Performance Summary

Rape Prevention and Education activities are taking place in all 50 states and the territories. As a result of this funding, the states and territories are better able to address sexual violence, provide more and better services to survivors of sexual assault and rape and to implement prevention and education programs.

Activities and accomplishments include:

- CDC is continuing to build a national program in sexual assault prevention. Staff have facilitated training on health communications and media advocacy intended to help state sexual assault prevention coordinators and coalition staff apply effective communications strategies to sexual violence issues.
- A National Sexual Violence Resource Center was established with CDC funding to provide leadership in the prevention of sexual violence as well as comprehensive information, policy analysis and development; technical assistance to sexual assault programs, state and local organizations, community volunteers, and the media; and to compile, synthesize, and distribute research and evaluation findings.
- CDC, with national community-based organizations, agencies of the Department of Health and Human Services, the Department of Justice, and other federal agencies convened the first National Sexual Violence Prevention Conference, May 16-19, 2000, in Dallas Texas, to strengthen communication and working relationships to address sexual violence.
- CDC continues to provide technical assistance and consultation to state sexual assault coalitions, state health departments, local programs, and researchers.
- Study: Training Needs of Health Care Providers in te Detection and Referral of Victims of Family and Intimate Partner Violence and Sexual Assault: CDC has contracted with the National Academy of Sciences, Institute of Medicine to conduct an assessment of the training needs of health care providers to detect, and refer victims of family and intimate violence or sexual assault. The results of this contract will provide the basis to support prevention-oriented research that will lead to greater knowledge of prevention strategies for professional training and education.
- Development of Uniform Definitions and Recommended Data Elements for Sexual Violence: Through an extensive collaborative process, CDC and a panel of experts (comprising federal and state representatives, researchers, physicians, and practitioners) are developing a set of recommendations designed to promote consistency in the use of terminology and data collection related to sexual violence. This will improve our ability to monitor national incidence and trends, determine the scope of this problem, assess the effectiveness of interventions, and inform policy.

2.9.1c Goal-by-Goal Presentation of Performance

Performance Goal: Enhance states' ability to implement effective rape prevention and education programs that will ultimately reduce the incidence of sexual assault.

Performance Measure	Targets	Actual Performance	Ref.
Develop case definitions for sexual assault.	**FY 03:** Pilot test sexual assault case definitions **FY 02:** Publish and disseminate case definitions	**FY 03:** **FY 02:**	Page 201
Enhance state and coalition capability to deliver effective sexual assault prevention programs.	**FY 03:** Conduct at least one training session based on needs assessment **FY 02**: Assess training needs of sexual assault prevention program staff	**FY 03**: **FY 02:**	Page 201

Verification/Validation of Performance Measure: Quarterly project reports will be collected from each program funded in order to verify performance.

2.9.1d Bicycle Helmet Usage and Head Injury Prevention

Bicycling is a common recreational activity and mode of transportation among children. About 27.7 million American children less than 15 years of age ride a bicycle. However, this activity is not without risk. In 1998, an estimated 362,000 such children sought emergency department care for a bicycle-related injury, of which head, facial, and ear injuries accounted for about 30% (108,600).

Several studies indicate that bicycle helmets can prevent as much as 88% of serious head or brain injuries. Despite this, helmet-wearing is not yet a social norm. In a 1994 CDC survey, an estimated 25 percent of children 5-14 years of age were reported to have always used a helmet in the last month. This survey is being repeated in 2000-2001. Universal use of bicycle helmets by children aged 4 through 15 years would prevent between 135 and 155 deaths, between 39,000 and 45,000 head injuries, and between 18,000 and 55,000 scalp and face injuries annually. Helmet use among teens is very low–3 percent.

CDC works to prevent these injuries and deaths by developing and disseminating injury control recommendations on bicycle helmets; collaborating with the National Highway Traffic Safety Administration, other federal agencies, and private and voluntary agencies to promote helmet use and bicycle safety; and providing cooperative agreements to state health departments to implement and evaluate programs that promote bicycle helmet use and bicycle safety. In 1994, CDC began funding programs in nine states to promote helmet use among children within specific communities. Substantial increases in helmet use occurred as a direct result. For example, in Pittsburgh, California, a comprehensive, multifaceted, three-year program resulted in helmet use increasing from 22% to 64% among elementary school children who participated in the program. CDC began a second round of state-based bicycle head injury prevention cooperative agreements in FT 1998 in five states. Preliminary data indicate further success (see performance measures table) below.

Performance Summary

CDC began a second round of stat-based bicycle head injury prevention cooperative agreements in FY 1998 in five states. Nearly all of these projects showed early progress (i.e., increase in observed helmet use). However, recent data show a decline in the progress of CDC-funded bicycle helmet promotion projects. Prior to program implementation the helmet use rate for the fifteen intervention communities in these five states combined was 40%, and increased to 58% overall by the end of the second grant year. However, by the end of the FY 1999, the cumulative helmet use rate had dropped to 55% in CDC-funded communities with fewer and fewer direct observations of helmet use. Moreover, the funded projects were not reaching the populations of greatest risk, underscoring CDC's limited capability to make a substantial impact on the reduction of these injuries.

CDC has worked with the federal and state partners to establish the National Bicycle Safety Network (NBSN). The NBSN is a coalition of public and private organizations and agencies working together to increase safe bicycle use. This includes reducing the incidence of traumatic brain injuries from bicyde use, and promoting safe cycling as a viable transportation alternative. The decline in helmet use rates, together with expanded promotional efforts of national nonprofit organizations such as the National SafeKIDS Campaign, and the Bicycle Helmet Safety Institute, has led to an de-emphasis of bicycle helmet promotion as a program priority for CDC. In FY 2001, CDC funded SafeKids to address injuries among children 14 years and under that will address the problem of bicycle-related injuries and the need for bicycle helmets, among other prevention activities. CDC also funded the NBSN to develop a national action plan which will contain recommendations for CDC and other partners of the network. Funding for bicycle helmet promotion projects has been diverted to other unintentional injury programs including falls among the elderly, dog bite prevention, and child safety (booster) seat promotion. A report on final rates of observed helmet use in funded communities will be completed by 8/2001.

CDC began funding CPSC's National Electronic Injury Surveillance System (NEISS) in FY 2000 for the first time which will allow for a direct national estimate of emergency department visits for bicycle-related health injuries. Although these data were received in March 2001, sufficient time is not available to conduct an analysis for this reporting period. A final determination of bicycle-related ED visits will be completed by May 2001.

In cases where head injury is not prevented, we need to understand better the medical and social aspects of disability associated with traumatic brain injury. The goal has been modified to align with program direction. Also, performance measures and targets have been changed so that they are outcome versus process oriented, and representative of the larger program direction. Instead of limiting measures to development of TBI through state health departments. The funding of registries is one element of the reporting system.

2.9.2d Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the number and severity of injuries related to bicycle-related head injuries by increasing the use of bicycle helmets by children in CDC-funded projects.

Performance Measures	Targets	Actual Performance	Ref.
The number of bicycle-related emergency department visits will be reduced by 5% per year from 123,475 in 1995.	**FY 00:** 5% reduction. **FY 99:** 5% reduction.	**FY 00:** Analysis is ongoing. **FY 99:**4/2001. **FY 95:** 123,475 bicycle-related emergency room visits.	Page 201
Increase the use of bicycle helmets by child and teen bicyclists in CDC-funded project areas.	**FY 02:** Disseminate information about the results of the multi-year projects in 5 states funded FY 99-01. **FY 01:** Increase use by 7%. **FY 00:** Increase use by 25%. **FY 99**: Increase use by 30%.	**FY 02:** **FY 01:** Baseline data on observed helmet use by 8/2001 in funded communities. **FY 00:** Data available 6/2001 in five states below. **FY 99:** California + 7%. Colorado +33% Florida -19% Oklahoma+200% Rhode Is. +0% **FY 98:** California +83%. Colorado +16% Florida + 3% Oklahoma+214% Rhode Is. +15% **FY 97:** Baselines: California 54%. Colorado 30% Florida 62% Oklahoma 6% Rhode Is. 8%	Page 201

Performance Goal: Provide quality data for public health programs to determine the medical and social impact associated with traumatic brain injury (TBI). These data can also be used for prevention program planning.

Performance Measures	Targets	Actual Performance	Ref.
Develop a TBI uniform reporting system with State health departments and determine the incidence and prevalence of TBI as instructed by Congress. Report information on uses of State TBI surveillance and follow-up registries data and disseminate information on TBI trends.	**FY 01:** Use State surveillance and follow registries data to disseminate information of TBI trends. **FY 00:** Disseminate a report on the uses of State TBI surveillance data and report the incidence/prevalence of TBI. **FY 99:** The number of population-based TBI follow-up registries will be increased from 1 in FY 1997 to 2 by FY 1999.	**FY 01:** **FY 00:** *TBI Surveillance in States* completed and distributed. **FY 99:** Funding provided for: a) two follow-up registries in Colorado and South Carolina, and b) 15 State TBI systems. TBI uniform reporting system formed. **FY 98:** 1 TBI follow-up registry. 15 State TBI surveillance systems.	Page 201
Implement CDC guidelines for design and use of TBI registries in 2 states by 2004. Report outcomes associated with TBI. Continued...	**FY 02:** Draft, review and finalize TBI registry guidelines. **FY 01:** Implement an interview instrument for follow-up of persons with TBI. Disseminate information on the outcomes associated with TBI disability. **FY 00:** Disseminate the TBI and Public Health Report that includes recommendations on the use of registries for providing information to persons needing services. Disseminate the TBI brochure. Continued...	**FY 02:** **FY 01:** **FY 00:** TBI report completed and distributed; TBI brochure completed and distributed. Continued...	Page 201

Performance Measures	Targets	Actual Performance	Ref.
...continued. Implement CDC guidelines for design and use of TBI registries in 2 states by 2004. Report outcomes associated with TBI.	...continued. **FY 99:** Guidelines for the use of population-based registries for collecting follow-up data on disabilities among persons with TBI will be developed by 2002.	...continued. **FY 99:** 0 Guidelines. Information on TBI surveillance activities in 33 states were reviewed to determine if they provide follow-up to individuals identified in their surveillance systems. Twelve states report they use their systems to identify TBI survivors to provide information about services. **FY 98:** 0 guidelines.	Page 201

Verification/Validation of Performance Measures: Surveillance data and follow-up information from TBI Registries will be used, along with programmatic oversight for verification and validation.

2.9.1e Fire-Related Injury Prevention

In 1997, there were an estimated 400,000 home fires in the U.S., which killed 3,360 individuals (1.1/100,000) and injured an additional 18,000 other people. Direct property damage caused by these fires exceeded $4.6 billion.

Residential fire deaths occur disproportionately in the southeastern states. They also occur disproportionately during the winter months of December-February, a period during which more than one-third of home fires occur, compared to one-sixth in the summer months of June-August. Many subgroups within the population remain highly vulnerable to fire morbidity and mortality. The rate of death due to fire is higher among the poor, minorities, children under age 5, adults over age 65, low-income communities in remote rural areas or in poor urban communities, and among individuals living in manufactured homes built before 1976, when the U.S. Department of Housing and Urban Development construction safety standards became effective. Other risk factors for fire-related deaths include: inoperative smoke detectors, careless smoking, abuse of alcohol or other drugs, incorrect use of alternative heating sources including usage of devices inappropriate or insufficient for the space to be heated, inadequate supervision of children, and insufficient fire safety education.

The majority of fire-related fatalities occur in fires that start at night while occupants are asleep, a time when effective detection and alerting systems are of special importance. Operable smoke alarms on every level provide the residents of a burning home with sufficient advance warning for escape from nearly all types of fires. If a fire occurs, homes with functional smoke alarms are half as likely to have a death occur as homes without smoke alarms. As a result, operable residential smoke alarms can be highly effective in preventing fire-related deaths. It is important to understand that any smoke alarm - whether ionization or photoelectric, AC or battery powered - will offer adequate warning for escape, provided that the alarm is listed by an independent testing laboratory and is properly installed and maintained. An estimated 94% of U.S. households have at least one smoke alarm; however approximately 1/4 of these alarms are nonfunctional due to battery removal (often due to nuisance alarms from cooking, etc.), or non-replacement of 9V battery each year. Through a Small Business Innovative Research project, CDC assisted in the development of a smoke alarm with a 10 year lithium battery which should promote

continued fire protection over a longer period of time. These alarms are also equipped with a hush button feature to discourage disassembly/removal due to nuisance alarms.

CDC works to prevent these needless deaths by conducting, coordinating, and funding fire and burn prevention research and interventions at the state, local, and community levels, and collaborates with organizations such as the U.S. Consumer Product Safety Commission, U.S. Fire Administration, other federal agencies, private and voluntary agencies on developing recommendations for conducting and evaluating smoke alarm installation programs.

Performance Summary

In 1994, CDC began funding programs to prevent fire-related injuries through the distribution and installation of smoke alarms in homes in high-risk communities that do not have adequate smoke alarm coverage. Measurable success has resulted from the implementation of these interventions. For example, to date, over 50,000 long life, lithium-powered smoke alarms have been distributed and/or installed through this program.

These successes are the basis for developing performance measures aimed at reducing incidence of fire-related injuries. CDC provided funding (FY 1998 - FY 2000) to five demonstration states to compare two strategies for increasing the prevalence of functional smoke alarms in high risk households, as well as to provide fire safety education in these homes. The objective is to determine the most effective strategy for increasing smoke alarm use/maintenance in U.S. households.

Additionally, CDC funds (FY 1999 - FY 2001) 14 states to conduct smoke alarm installation programs coupled with fire safety education in at least 2 communities (each project year) at high risk for residential fire fatalities. Projects will work with local health departments, fire service personnel, and other community based groups in implementing these programs at the community level. Each of these projects have chosen to install lithium battery-powered smoke alarms. The objective of these programs is to increase the proportion of U.S. households with functional smoke alarms, particularly those at highest risk for fire fatalities/injuries, such as households with children under 5 years of age and/or older adults.

2.9.2e Goal-by-Goal Presentation of Performance

Performance Goal: Reduce the incidence of fire-related injuries by increasing the percent of residential dwellings that have at least one functional smoke alarm on each habitable floor in CDC-funded projects.

Performance Measures	Targets	Actual Performance	Ref.
The incidence of residential fire-related deaths will be reduced.	**Residential Fire Incidence:** **FY 02:** 1.1 per 100,000. **FY 01:** 1.1 per 100,000. **FY 00:** 1.1 per 100,000. **FY 99:** 1.1 per 100,000.	**Residential Fire Incidence:** **FY 02:** **FY 01:** 10/2002. **FY 00:** 10/2001. **FY 99:** 1.2 per 100,000. **FY 97:** 1.1 per 100,000. **FY 94:** 1.4 per 100,000.	Page 201

Performance Measures	Targets	Actual Performance	Ref.
The proportion of homes with at least one smoke detector on each habitable floor will be increased in 2000 in CDC-funded projects. *(This data source has changed from the one-time CPSC Smoke Detector Survey to the annual National Health Interview Survey).	**FY 02:** 70% homes with smoke detectors on each habitable floor. **FY 01:** 65% homes with smoke detectors on each habitable floor. **FY 00:** 60% homes with smoke detectors on each habitable floor. ***FY 99:** The proportion of homes with at least one smoke detector will be increased from 80% in 1993 to 88% in 1999.	**FY 02:** **FY 01:** Data will be available Fall 2002. **FY 00:** Data will be available Fall 2001. ***FY 99:** 87% homes with at least one smoke alarm. **FY 93:** 52% homes with smoke detectors on each habitable floor. 80% home with at least one smoke detector (source is one-time CPSC survey).	Page 201
Recommendations for conducting and evaluating smoke detector promotion programs will be published.	**FY 01:** Recommendations will be published and disseminated. **FY 00:** Recommendations will be published. **FY 99:** Recommendations will be developed for constituent review.	**FY 01:** **FY 00:** Report containing recommendations will be developed and published in FY 2001. **FY 99:** Achieved: Draft recommendations prepared.	Page 201

Verification/Validation of Performance Measures: For the first measure we will use the National Vital Statistics System. For the remaining measures, programmatic oversight will be used to verify and validate performance measures.

National Vital Statistics System: The National Vital Statistics System is responsible for the Nation's official vital statistics. These vital statistics are provided through state-operated registration systems. The registration of vital events--births, deaths, marriages, divorces, fetal deaths, and induced terminations of pregnancy -- is a state function. However, standard forms for the collection of the data and model procedures for the uniform registration of the events are developed and recommended for state use through cooperative activities of the states and the National Center for Health Statistics (NCHS). (National Center for Health Statistics, CDC).

2.9.1f Injury Prevention and Control Research

The CDC injury prevention and control research program funds and monitors extramural and intramural research in three phases of injury control: prevention, acute care, and rehabilitation. The program also funds research in the two major disciplines used in injury control research: biomechanics and epidemiology. Research supported by the program focuses on the broad-based need to reduce morbidity, disability, death, and costs associated with injury. The research program classifies injuries as intentional or unintentional:

- Intentional injuries result from interpersonal, or self-inflicted, violence and include homicide, assaults, suicide attempts, elder and child abuse, domestic violence and rape;
- Unintentional injuries include those that result from such causes as motor vehicle crashes, falls, fires, poisonings, and drownings;

CDC's extramural research program supports individual, investigator-initiated research that is targeted to a specific set of research questions. The program funds ten injury control research centers or "Centers of Excellence," two specialized prevention research centers, which address suicide and violence against women, as well as individual research grants and small business Innovative research grants.

In the intramural program, CDC scientists conduct high quality studies that apply established epidemiologic and behavioral science methods to evaluate the efficacy and effectiveness of interventions, analyze mortality and other data to understand the scope of the injury problem and who is as greatest risk, and study information on why people are at risk for injury and what factors keep some from becoming injury victims.

In FY 2002, CDC seeks to address:
- fall related injuries among children and older adults, elderly drivers, and child passenger safety; and
- child maltreatment, suicide, violence against women, and youth violence.

Injuries among high-risk populations are a special focus. Primary research activities involve the rigorous assessment of the effectiveness (i.e., the impact or outcome) of interventions to reduce unintentional injury risk behaviors, injury morbidity, mortality, and/or costs related to injuries at home, in recreation, and during travel. CDC conducts and sponsors research that focuses on surveillance of unintentional injuries and on the efficacy and effectiveness of interventions, such as the development and evaluation of promising new interventions, and the evaluation of widely implemented interventions for which evaluation is needed. Research projects address counseling, epidemiology, health services delivery, training, education, product engineering, environmental and behavioral change, and policy. Projects are variously carried out in community settings, laboratories, schools, academic centers and clinical settings. Research areas include falls prevention among the elderly, reducing residential fires and burns, bicycle safety, decreasing alcohol-impaired driving, playground injury prevention, suicide, violence against women, youth violence, older driver risks, child passenger safety, Native American injury prevention, drowning prevention, water safety, sports injuries, motor vehicle occupant protection, dog-bites, and pedestrian injuries.

Performance Summary

The extramural program supports a productive and relevant research portfolio and uses an extramural process that is both credible and transparent. This is achieved through the use of a peer review approach, referred to as the "dual review system, " which is based on two sequential levels of review. These two levels of review are conducted by the Injury Research Grant Review Committee (IRGRC) and the Advisory Committee for Injury Prevention and Control (ACIPC). The IRGRC is composed of experts in injury-related scientific disciplines or current research areas that enables their evaluation of the scientific and technical merits of grant applications, and is chartered specifically for grant application review. The ACIPC is composed of both scientific and lay representatives who are noted for their expertise, interest, or activity in matters related to the mission of the CDC. ACIPC recommendations are based not only on

considerations of scientific merit, as judged by the IRGRC, but also geographic balance and the relevance of the proposed study to CDC's programs and priorities. At present, CDC does not conduct a peer review process for intramural research or for many evaluation projects funded within state and local health departments, community-based organizations, or research institutions.

2.9.2f Goal-by-Goal Presentation of Performance

Performance Goal: Increase external input on the research priorities, policies, and procedures related to the extramural research supported by CDC.

Performance Measures	Target	Actual Performance	Ref.
Increase efficiency and effectiveness of research investments by employing competitive peer-review processes.	**FY 02:** Complete a CDC injury research agenda for defining the scope and priorities for injury research at CDC. Implement at least one more peer-review process for a grant program, cooperative agreement program, or intramural research. **FY 01:** Use special emphasis panels to review at least one cooperative agreement announcement.	**FY 02:** **FY 01:** **FY 00:** Baseline - only investigator initiated extramural grants and Injury Control Research Center applications are peer-reviewed.	Page 201

Verification/Validation of Performance Measure: Programmatic oversight will be used to verify and validate performance measures.

2.9.1g Data Access

CDC will build and expand and existing model system for injury mortality data from the National Vital Statistics System called WISQARS™ (Web-based Injury Statistics Query and Reporting System) (http://www.cdc.gov/ncipc/wisqars) that can be accessed through the CDC home page. This system which was developed by CDC to provides injury and violence-related death data to injury control colleagues, decision makers, the press, students, and the public worldwide has proven to be very effective. Recently we have had an average of over 500 visits per day to this site from all over the country and the world suggesting that this system is meeting important data needs. It has also taken a substantial burden from CDC epidemiologists, statisticians, and programmers in responding to public inquiries. This menu-driven system allows the user to request data as needed for their particular purpose and presents the data in a standard table format or in a table format easily downloaded. This system enhances reporting of injury data beyond "only mortality data" from the National Vital Statistics System by adding non-fatal injury data obtained from the National Electronic Injury Surveillance System–All Injury Program at CPSC.

Performance Summary

During FY 00, CDC completed development of the initial phase of WISQARS™, a system for injury mortality data from the National Vital Statistics System that can be accessed through the CDC home page. This system which provides injury and violence-related death data to injury control colleagues, decision makers, the press, students, and the public worldwide has proven to be very effective means of making injury-related data available for general usage. CDC continues to assist epidemiologists, statisticians, and injury practitioners with data requests as needed for their particular purpose. CDC plans to expand the capacity of WISQARS(tm) to provide data on selected types of injuries. The next expansion of this online statistical service will be the addition of non-fatal injury data. In future years, CDC will add additional data by injury types, such as traumatic brain injury.

2.9.2g Goal-by-Goal Presentation of Performance

Performance Goal: Provide online access to injury prevention data.

Performance Measures	Target	Actual Performance	Ref.
Implement a user-friendly, personal computer-based system for accessing Federal injury data in a variety of national and state-based systems	**FY 02**: Purchase necessary hardware and software (servers); and design computer programs for integrated data warehousing system.	**FY 02:** Expand WISQARS to include nonfatal injury statistics. **FY 01**: WISQARS is the baseline – includes only mortality statistics.	Page 201

Verification/validation of performance measures: Programmatic oversight will be used to verify and validate performance measures.

2.9.1h Electronic Emergency Department Public Health Reporting

The nearly 5,000 Emergency Department (EDs) in the United States are strategically well positioned for public health surveillance of a wide spectrum of diseases and injuries, from emerging infections, asthma, and adverse drug events to unintentional injury, violence, and the threat of chemical and biological terrorism. However, variation in the way that data are entered in ED patient records, missing data, and lack of timely availability have impeded the use of ED records for public health surveillance. As electronic patient record keeping enters into the mainstream of ED practice, these shortcomings can be addressed through careful attention to structured data entry and health data standards applicable to each data element, safeguards to protect the privacy and confidentiality of personally identifiable data, and the specific needs of surveillance systems at the local, state, and national levels.

Secure, computer-to-computer transmission of ED data from DEEDS implementation sites to state health agencies in a standard, structured format will provide a sound technological framework for electronic public health reporting by EDs throughout the United States. Improvements in the uniformity, quality, and accessibility of ED data will yield immediate benefits for public health surveillance, and as more effective ties between EDs and health agencies are established, these linkages will be available for use in responding to any future, population-wide health emergencies that may arise.

Performance Summary

To ensure that we will have consistent data to study and improve trauma care, along with more timely data for public health surveillance of injuries and other acute medical problems, CDC is leading a national effort to develop uniform data elements for emergency department (ED) records. CDC published Data Elements

for Emergency Department Systems (DEEDS) as a set of recommendations to foster uniformity in the way that emergency department records are created, stored, transmitted, and used. The specifications are intended primarily for electronic patient records but also are useful for paper-based record keeping. Specific uses/achievements include:

- The DEEDS project anticipates increasingly rapid migration to electronic record systems with new opportunities for public health use of clinical information;
- DEEDS is being used by emergency medical and nursing practitioners, record system developers, health data standards organizations, and federal agencies seeking more uniform and accessible emergency department data;
- The Health Care Financing Administration (HCFA) has incorporated DEEDS in its plans for implementation of the Health Insurance Portability and Accountability Act (HIPAA), specifically the emergency department claims attachment;
- Leading national data standards organizations, such as Health Level 7 (HL7) have incorporated parts of DEEDS into their own specifications; and
- Projects in Oregon and North Carolina, funded by CDC's Health Information and Surveillance Systems Board (HISSB), a cross-cutting organizational unit that seeks to integrate information and surveillance systems using CDC-wide standards, are using DEEDS in innovative electronic public health reporting projects.

2.9.2h Goal-by-Goal Presentation of Performance

Performance Goal: Improve the uniformity, quality, and accessibility of emergency department (ED) data for public health surveillance in several States, ultimately developing the capacity to improve data in all States through development of guidelines, recommendations, or technical assistance.

Performance Measures	Targets	Actual Performance	Ref.
Establish the capability of state health departments to receive secure transmission of non-identifiable patient data from participating emergency departments.	**FY 02**: Work with at least three States to strengthen the capability of emergency departments to electronically report data to state health departments. **FY 01:** Fund at least one State to strengthen the capability of emergency departments to electronically report data to state health departments.	**FY 01:** **FY 00:** No health departments can receive secure data transmissions from hospital EDs (baseline).	Page 201
Total Program Funding (Dollars in thousands)	FY 2002: $ 143,655 (Estimate) **FY 2001:** $ 142,850 (Final Appropriation) **FY 2000:** $ 131,501 (Actual) **FY 1999:** 10/2001 (Actual)		

Verification/validation of performance measures: Programmatic oversight will be used to verify and validate performance measures.

2.10 Occupational Safety & Health

2.10.1 Program Description, Context, and Summary of Performance

The National Institute for Occupational Safety and Health (NIOSH), in CDC, is charged with conducting a national program of scientific research in occupational safety and health. The purpose of this program is to establish and disseminate scientific and public health information necessary to ensure safe and healthful working conditions for 127 million American working men and women. Through its multidisciplinary corps of engineers, epidemiologists, industrial hygienists, physicians, and toxicologists, NIOSH performs basic public health functions to improve the safety and health of workers. For example, NIOSH : (1) determines the nature and extent of the occurrence and causes of work injuries and diseases to target research and prevention activities; (2) detects and investigates workplace health and safety problems, identifying their causes and effects; (3) conducts studies and demonstrations to identify effective engineering solutions, personal protective equipment, work organization and practices, and health communications strategies to prevent work injuries and diseases; (4) develops and disseminates recommendations for assuring the safety and health of workers; and (5) provides training for occupational safety and health professionals to meet the country's needs for expertise in the prevention of workplace injury and illness.

To provide leadership in research, and the occupational safety and health community developed the National Occupational Research Agenda (NORA) in 1996. More than 500 organizations and individuals outside NIOSH provided input into the development of the Agenda. This attempt to guide and coordinate research nationally is responsive to a broadly perceived need to systematically address those topics that are most pressing and most likely to yield gains to the worker and the nation. Through partnership, NORA is also designed to leverage the impact of government and private sector resources for research. NIOSH's four performance objectives provide a strong foundation from which to implement NORA and assure progress in improving worker safety and preventing occupational disease, injury and disability.

These performance objectives systematically provide leadership and the creation of systems, guidelines, and interventions that will lead to the ultimate goal of reducing worker disease, injury, and disability. These are innovative and challenging objectives that when accomplished will result in heightened support for occupational safety research, increased awareness of worker safety, and ultimately in a decrease in occupational disease and injury. These objectives motivate and stimulate research and interventions in occupational safety and health through investments in research, the development of surveillance systems for occupational disease and injury, assessments and application of recommended interventions, and broad-based communication efforts. Many of the immediate performance measures will provide a frame of reference, capacity assessment, and baseline information needed to measure the quality, relevance, and outcomes of the Institute's work.

Partnerships and Links to DHHS Strategic Plan and Partners

These performance measures are related to DHHS Goal 1: Reduce major threats to the health and productivity of all Americans, (Objective 1.2) Reduce the incidence and impact of injuries and violence in American Society; Goal 2: Improve the economic and social well-being of individuals, families, and communities in the United States, (Objective 2.4) Improve the safety and security of youth; Goal 5: Improve the nation's public health systems, (Objective 2.5) Increase the proportion of older Americans who stay active and healthy, (Objective 5.1) Improve the capacity of the public health system to identify and respond to threats to the health of the nation's population; and Goal 6: Strengthen the Nation's health sciences research enterprise and enhance its productivity, (Objective 6.2) Improve our understanding of how to prevent, diagnose and treat disease and disability, (Objective 6.3) Enhance our understanding of how to improve the quality, effectiveness, utilization, financing, and cost-effectiveness of health services, (Objective 6.4) Accelerate private-sector development of new drugs, biologic therapies and medical technology, (Objective 6.5) Strengthen and diversify the base of well-qualified health researchers. (Objective 6.6) Improve the communication and application of health research results.

2.10.2 Goal-by-Goal Presentation of Performance

Performance Goal: Conduct a targeted program of research to reduce morbidity, injuries, and mortality among workers in high priority areas and high-risk sectors.

To attain its goal of improving the safety and health of the nation's workforce, the U.S. Congress established the National Institute of Occupational Safety and Health (NIOSH) and gave it a statutory mandate to conduct research in occupational safety and health. Indeed, NIOSH is the principle federal agency for research in this area; fully 86% of the federal research budget for occupational safety and health is funded through NIOSH.

Performance Summary

In 1996, NIOSH and its partners established the National Occupational Research Agenda (NORA), a consensus framework designed to guide them in pursuing prioritized, targeted occupational safety and health research into the next decade. This broad-based partnership initiative involved over 500 organizations and individuals external to NIOSH in the identification of 21 priority research areas in three broad categories. To date, 17 scientific organizations have replicated aspects of the NORA process with NIOSH consultation. The success of the NORA partnership was highlighted by its selection as a semi-finalist in the 1998 innovations in American Government Award.

NIOSH conducts both intramural and extramural research, allocating 75% of new research grant funding to its extramural program. To ensure its scientific quality, the extramural program is fully integrated into the NIH grants system. To ensure relevance, NIOSH has rapidly aligned its extramural and intramural grants program with the NORA priorities. NIOSH has established and achieved annual targets to increase investments in NORA-related research. For example, in 1996 NIOSH invested 50% of its extramural funds in NORA priority areas. This climbed to 92% in 1999. To extend the reach and impact of NORA and to leverage federal research dollars, NIOSH had developed joint funding opportunities with other federal agencies. These government partnerships have grown from 3 in 1998 to 11 in FY 2000.

NORA has begun to shift the spectrum of occupational, safety and health research to achieve more balance between problem identification research and problem solving research, as evidenced by an eight-fold increase in NIOSH funding of intervention effectiveness research between 1996 and 1999. These types of studies provide crucial information to employers, workers, and others on the effectiveness of specific strategies for preventing workplace injury and illness. In FY 2000, 10% of total NORA funding was attributed to Intervention Effectiveness Research.

Through geographically diverse cooperative research agreements, NIOSH has targeted agriculture and construction for special attention. These two industries consistently lead the Nation in occupational fatalities and sustain high levels of injury and illness. These investments are paying off. For example, NIOSH has supported and collaborated in research to prevent tractor roll-overs, the leading cause of fatalities on farms. In two counties in Kentucky, the purchase of roll-over protection retrofit kits jumped from 4 in 1998 to 69 in 1999. Buoyed by success in these two industries, NIOSH has begun to focus attention on the health care industry. NIOSH is presently conducting the largest ever clinical skin test study of sensitivity to natural rubber latex proteins (NRL) in health care workers (HCWs). This is being done in collaboration with the University of Cincinnati, Johns Hopkins University Medical School and the Rubber Research Institute of Malaysia.

NIOSH's intramural research program is nationally and internationally recognized for its leadership and as a world resource in occupational safety and health. Its epidemiologic, toxicologic and engineering research has increased the knowledge base needed to understand causes of occupational illness and injury; accurately assess exposures to hazardous agents; and prevent and control hazardous conditions and their associated injuries and illnesses. For example, NIOSH researchers identified glass fibers as a possible carcinogen; confirmed the potential for solvents to cause hearing loss (relevance to 9 million workers); documented a 90% reduction in drywall dust emissions (a silicosis risk) with the use of a commercially available ventilated drywall sander; identified mechanical lifting technology effective for reducing

ergonomic hazards in health care workers (of relevance to almost 2 million nursing home workers); and produced and updates a manual of state-of-the-art analytic methods used by more than 1,700 U.S. laboratories and by laboratories around the world.

In FY 2000, NIOSH's commitment to NORA is reflected through the impressive upward trends in the amount of both intramural and extramural research funding. In FY 2000, NIOSH funded 165 extramural research grants in several NORA research priority areas, making this the largest infusion of extramural funding ever by the federal government for occupation safety and health research. NIOSH increased its overall investment in NORA-related research by $60.1million compared to FY 1996 (390% increase). This was achieved through congressional support and the reinvestment of research funds into NORA priority areas.

Dedication to NORA and occupational safety and health has produced a broad-based NORA liaison committee, a network of public-private partnerships, successful efforts of 20 NORA teams (including outreach, conferences and symposia, and production of white papers, documents and journal articles), a grants process that has produced record breaking funding for target research areas (for 3 consecutive years), and recognition as a partnership model for other organizations embarking in similar planning efforts. Using key words, NIOSH tracks peer-reviewed publications in selected NORA priority areas. Since NORA was initiated in April 1996, the average annual publication count for the years 1993 through 1995 serves as a baseline measure of publication activity for each of the NORA topic areas. Similarly, the average publication activity for the three-year period following the introduction of NORA (i.e., 1997-1999) was calculated. This metric has shown a 26% increase in overall NORA-related publications.

The following table illustrates NIOSH performance in the area of research. The GPRA process has encouraged agencies to enhance efforts to measure performance. Thus the table includes several new and enhanced performance measures and targets for FY 2002.

Performance Measure	Target	Actual Performance	Ref.
Increase intramural and extramural research in NORA priority areas and assure quality and relevance of this.	**FY 02:** Maintain FY 01 funding level. Maintain large-scale intramural research programs in targeted NORA areas. Evaluate components of the intramural research program through NIOSH Board of Scientific Counselors or other external mechanism.	**FY 02:**	Page 212
Continued...	Continued...	Continued...	

Performance Measure	Target	Actual Performance	Ref.
...continued. Increase intramural and extramural research in NORA priority areas and assure quality and relevance of this.	...continued. **FY 01:** Funding level will increase by 12% over FY 00. Establish 2 additional large-scale intramural research programs in targeted NORA areas. **FY 00:**Target achieved. $32.7 mil in extramural grants and $42.8 mil in intramural projects. Exceeded target. Established 3 large-scale intramural NORA programs (Asthma Reduction, Musculoskeletal Disorders, and Development of Dermal Policy).	...continued. **FY 01**: Fall/2001. **FY 00:**Target achieved. $32.7 mil in extramural grants and $42.8 mil in intramural projects. Exceeded target. Established 3 large-scale intramural NORA programs (Asthma Reduction, Musculoskeletal Disorders, and Development of Dermal Policy). **FY 99:** Target achieved. $26.7 mil in extramural grants, $34.4 mil in intramural projects. **FY 96:** 1996 baseline: $6.7 mil in extramural grants, $8.7 mil in intramural projects.	Page 212

Performance Measure	Target	Actual Performance	Ref.
Expand involvement of other federal agencies in NORA-related research, as indicated by annual increases of other federal agencies for NORA-related research.	**FY 02:** Track funding of other federal agencies in NORA-related research. Seek additional funding partners for NORA-related grants and cooperative agreements. Co-sponsor 5 research and scientific conferences with other federal agencies.	**FY 02:** 5/03.	Page 212
	FY 01: Increase over FY 00. Co-sponsor 3 research and scientific conferences with other federal agencies.	**FY 01:** 5/02.	
	FY 00: Increase over FY 99.	**FY 00:** $24.4 mil. projected for FY 00, actual data available 5/01.	
	FY 99: Current levels of NIOSH and other federal agencies' intramural and extramural research funding in NORA areas will be determined as a baseline and annual increases will be calculated.	**FY 99:** In 1998, other federal agencies reported $23.4 million for NORA-related funding. **FY 96:** $15 million for NORA-related funding.	

Performance Measure	Target	Actual Performance	Ref.
Increase the science base of occupational safety and health through publications, innovations, and research partnerships.	**FY 02:** Increase the number of peer-reviewed publications by NIOSH and NIOSH-sponsored researchers. Increase number of NIOSH innovations over FY 01. **FY 01**: Establish baseline of peer-reviewed publications of NIOSH-sponsored researchers. Establish baseline of number of NIOSH innovations, including inventions, patents, new technologies, and research partnerships.	**FY 02**: 12/02. **FY 01**: 12/01.	Page 212
Report annual NIOSH research accomplishments in high priority and high-risk areas (e.g., agriculture, construction, mining, healthcare workers).	**FY01**: Maintain publication productivity in peer-reviewed journals. **FY 00**: Increase number of peer review articles to 254. **FY 99**: Establish baseline measure.	**FY 01**: 12/01. **FY 00**: Target achieved and exceeded. 260 peer-reviewed articles in FY 00. **FY 99:** 234 peer-reviewed articles.	Page 212
Demonstrate impact of NORA on research activity through bibliometrics and other proxy measures, such as accomplishments of the NORA partnership teams. Continued...	**FY 02:** Continue to track frequency of publications in NORA priority areas. **FY 01**: Begin to track frequency of peer-reviewed publications in selected NORA priority areas for 1996-2000. Track NORA Team products, including publications, scientific meetings, etc. **FY 00**: Baseline bibliometrics/citation counts for all NORA areas established. Continued...	**FY 02:** 12/02. **FY 01:** 12/01. **FY 00:** Achieved. Baseline established for 9 remaining priority areas. Early reviews of FY 97-99 show an increase in overall NORA-related publications (26%). Continued...	Page 212

Performance Measure	Target	Actual Performance	Ref.
...continued. Demonstrate impact of NORA on research activity through bibliometrics and other proxy measures, such as accomplishments of the NORA partnership teams.	...continued. **FY 99**: Establish protocol on the use of bibliometrics and other research proxy measures.	...continued. **FY 99:** Baseline protocol established using National Library of Medicine and Institute of Scientific Information databases. Bibliometric baselines for 12 of the 21 NORA Priority areas was completed. 20 NORA partnership teams established; team products are tracked as a measure of NORA's success.	Page 212

Validation/Verification of Performance Measures: This information will be reported through the Project Planning System of the CDC Integrated Resources Information System (IRIS). A team of NIOSH's senior scientists will review all data reported for accuracy. Baseline data and data collected in subsequent years is collected in the same format so that accurate comparisons can be made. Partnering efforts have increased the ability to effectively track resources outside the organization.

Performance Goal: Ensure safe and healthful working conditions by developing a system for surveillance for major occupational illnesses, injuries, exposures, and health hazards.

Understanding and preventing work-related injuries and illnesses requires focused efforts to identify, quantify, and track both health outcomes and their associated workplace conditions. Surveillance activities provide the ongoing systematic collection, analysis, interpretation, and dissemination of data needed for targeted follow-up to identified areas for occupational safety and health prevention research and other activities.

Performance Summary

As the primary agency for occupational safety and health research, NIOSH provides a critical role in enhancing the generation, access to, and use of surveillance data. To carry out these efforts, NIOSH provides funding and technical assistance for 25 state-based surveillance programs that track the magnitude of occupational health and injury problems. NIOSH collaborates with 13 state health departments through the Sentinel Event Notification System for Occupational Risk (SENSOR) cooperative agreement to improve recognition and prevention of occupational sentinel events. Events targeted include acute pesticide-related illness, amputations, asthma, burns, carpal tunnel syndrome, dermatitis, noise-induced hearing loss, silicosis, and youth injury.

Twenty-seven states participate in the NIOSH Adult Blood Epidemiology Surveillance (ABLES) effort to identify and count cases of elevated blood lead levels among U.S. adults; among these NIOSH supports 21 of these states to collect data on blood lead levels from local health departments, private health care providers, and from reporting laboratories. The states use these data to follow-up with physicians, target on site inspections of work sites, provide referrals to cooperating agencies in the event enforcement action is necessary, and to target efforts to prevent continuing exposures.

In 1998, an estimated 3.6 million occupational injuries and illnesses were treated in hospital emergency departments across the U.S. This represents an annual rate of 2.8 injuries or illnesses per 100 workers with men incurring almost twice the rate of injuries and illnesses as women (3.4 vs. 1.8 per 100). Estimates such as these are made possible because of a collaborative effort between NIOSH an the Consumer Product Safety Commission to collect work-related injury and illness information from a national

hospital sample through the National Electronic Injury Surveillance System (NEISS). NEISS collected information characterizing injuries and their causes on 47,000 cases in 1998. Further in-depth information has been collected through NEISS in telephone interviews concerning special populations of workers, such as youth, older workers, and children in agricultural settings. Significant prevention efforts have been made, particularly in the area of working youth, since 1995 due to the information gained from NEISS.

In FY 2000, NIOSH completed work with several hundred agency and individual stakeholders to develop a national strategic plan for occupational safety and health surveillance, accomplishing a CDC performance objective under GPRA. This work is published in a report titled: "Tracking Occupational Injuries, Illnesses, and Hazards for Prevention: the NIOSH Surveillance Strategic Plan." Implementing this plan will result in improved injury and illness recognition and reporting, improved targeting of both governmental and non-governmental research and prevention services to the major causes of workplace injury, illness, and disability, and an improved ability to evaluate the effectiveness of these investments. Improved targeting and evaluation will lead to increased prevention effectiveness in occupational safety and health. The detailed agenda for this strategic plan includes:

- Improve the national surveillance system;
- Improve surveillance at the state level;
- Develop better methods of surveillance for high risk or underserved populations;
- Improve surveillance conducted by private sector organizations;
- Increase research of surveillance methods.

Additionally, NIOSH, with extensive stakeholder involvement, has developed a detailed strategic plan for developing a system of occupational hazard and exposure surveillance, an effort that NIOSH is leading with leveraging of resources from other federal agencies (e.g., Occupational Safety and Health Administration (OSHA).

In FY 2000 and in response to stakeholder demand, NIOSH published the Worker Health Chartbook 2000, a compilation of occupational injury, illness, and fatality data from several governmental surveillance systems. The first of its kind, the Chartbook is a unique resource for occupational safety and health professionals, researchers, policy makers, and industry and labor organizations who need data to track health outcomes and their associated workplace conditions, as well as to target their interventions. The Chartbook was disseminated widely and, along with its data tables, has been made available electronically.

Performance Measures	Targets	Actual Performance	Ref.
Implement NIOSH Surveillance Strategic Plan and seek opportunities for enhancement through stakeholder interaction, NORA teams, and collaboration with states.	**FY 02:** Increase activities among stakeholders (e.g., cooperative agreements, best practices workshops, prevention activities, etc.). **FY 01:** Establish baseline for activities among stakeholders in state, federal and private sectors.	**FY 02:** **FY 01:** Fall 2001.	Page 212

Performance Measures	Targets	Actual Performance	Ref.
Complete a comprehensive surveillance planning process and implement recommendations.	**FY 00:** Finalize surveillance strategic plan and begin implementation of the recommendations. **FY 99:** Undertake a comprehensive surveillance planning process with NIOSH partners at the State and Federal levels to establish surveillance priorities and identify roles for various agencies.	**FY 00:** Target achieved. "Tracking Occupational Injuries, Illnesses, and Hazards: The NIOSH Surveillance Strategic Plan" was published. Projects are being developed for implementing recommendations. **FY 99:** Planning process completed; draft surveillance strategic plan developed.	Page 212
Collect, analyze, and disseminate surveillance information on occupational illnesses, injuries, and hazards to help target and evaluate interventions and prevention efforts. Continued...	**FY 02:** Publish surveillance reports addressing 2 major occupational injury or illness issues annually. Target one national prevention activity annually. Prepare and disseminate public use data sets. **FY 01:** Initiate web-based surveillance information dissemination (to improve public access). Pilot test improved data collection methods. Initiate hazard surveys targeted by workforce sector. **FY 00:** Continue to collect, analyze, and disseminate surveillance data. Continued...	**FY 02:** **FY 01:** Fall 2001. **FY 00:** Target achieved. Examples include: Simple Solutions: Ergonomics for Farm Workers Continued...	Page 212

Performance Measures	Targets	Actual Performance	Ref.
...continued. Collect, analyze, and disseminate surveillance information on occupational illnesses, injuries, and hazards to help target and evaluate interventions and prevention efforts.	...continued. **FY 99:** Collect, analyze, and disseminate surveillance data and produce reports.	...continued. Published an MMWR article pertaining to pesticide poisoning using data collected through the Toxic Exposure Surveillance System (TESS) June 9, 2000 Vol 29). 1999 Work Related Lung Disease Surveillance Report (WORLD) was disseminated. NIOSH Worker Health 2000 Chartbook of Occ Surveillance Information was disseminated 7/00. Injury, Illness, and Hazard Exposures in Mining Industry 1986-1995 was released in Summer 2000. **FY 99:** Produced a special hazard review of high risk small business industries; initiated development of a ChartBook on Worker Health statistics; Developed 1999 WORLD Report. 5 publications based on National Occupational Mortality Surveillance (NOMS) data. Completed and disseminated 23 reports based upon the results of 40 firefighter fatality investigations in FY99, plus related publications	Page 212

Validation/Verification of Performance Measures: This information will be reported through the Project Planning System of the CDC Integrated Resources Information System (IRIS). A team of NIOSH's senior scientists will review all data reported for accuracy.

Performance Goal: Promote safe and healthful working conditions by increasing occupational disease and injury prevention activities through workplace evaluations, interventions, and NIOSH recommendations.

Performance Summary

NIOSH conducts three programs for epidemiologic investigations similar to the "outbreak" type epidemiologic investigations carried out by other programs of the CDC: Health Hazard Evaluations (HHE), Fatality Assessment Control and Evaluation (FACE), and Firefighter Fatality Investigation and Prevention (FFIP). These NIOSH programs, respectively, investigate the occurrence of occupational health problems among workers of individual employers, incidents in which workers are fatally injured and fatalities among fire fighters. The programs draw upon the extensive research and technical expertise of the Institute, both to evaluate the causes of diseases and injury and to design and recommend solutions to prevent future occurrences. In FY2000, NIOSH conducted 57 investigations of firefighter fatalities around the country including 17 investigations of fire fighters who suffered fatal heart attacks in the line of duty. These investigations involved both career and volunteer fire fighters. Data from these investigations has been used to generate: 1) individual fatality investigation reports and 2) a database that can be used to develop hypotheses for prevention and intervention activities. Information and recommendations from each investigation were posted on the NIOSH Fire Fighter Web page: http://www.cdc.gov/niosh/ firehome.html. Information was disseminated through three mailings to all 36,000 career and volunteer fire departments in the U.S. Based on feedback from fire departments across the country, the results of NIOSH investigations are being used to update or modify standard operating procedures on the fire ground, to justify and support equipment needs, and to improve fire fighter training.

NIOSH conducts about 300 evaluations annually of potential health problems at work sites, derived from statutory obligations to be responsive to requests from employers, employees, and other governmental entities to assess the potential work-relatedness of health problems and recommend effective prevention and remedial strategies. The HHE program has led to the identification of many of the emerging occupational health problems of the past three decades, such as occupational asthma, cumulative trauma disorders, and indoor air quality. More recently, HHEs are driving initiatives targeting the service sector and particularly health care workers, where NIOSH has conducted 135 HHEs since 1995, addressing a range of problems from job stress and ergonomics to infectious disease transmission and reproductive toxicants. In FY 2000, NIOSH mistakenly projected a target decrease in the number of site visits that would be conducted in response to requests for HHE's. The intention of this target was to respond to a larger number of HHEs through technical assistance letters while maintaining or increasing the number of site visits that would be conducted based upon the volume and complexity of the requests received.

FACE investigations identify work situations at high risk for fatal injury and formulate and disseminate prevention strategies to employers, workers, unions, public agencies and others in positions to advance prevention. One hundred to two hundred investigations take place each year at both state and national levels. FACE investigations recognize ongoing workplace accidents and are leading the way in uncovering new threats to worker, such as the widespread use of wireless communication devices which have fueled accelerated construction of towers to hold transmitting devices for cellular phones, personal communication services, radio and television broadcast antennas. The Federal Communications Commission estimates that at least 75,000 towers are being constructed each year. NIOSH estimates the risk of fatalities among this workforce is between 49-468 deaths annually per 100.000 workers, versus 5 per 100,000 workers overall. NIOSH efforts are informing voluntary and regulatory approaches to this major emerging safety problem.

Along with these epidemiologic programs, NIOSH conducts, analyzes, and translates an enormous amount of research each year in support of public health policy. This work is reflected in policy recommendations issued by NIOSH, scientific input into rule making and the development of enforcement procedures by OSHA, Mine Safety and Health Administration (MSHA), EPA and other public agencies.

Performance Measures	Targets	Actual Performance	Ref.
Respond to requests for workplace evaluations and assistance from employers, workers, and others, and provide practical advice to address problems.	**FY 02**: Conduct site visits on at least 30% of all requests for Health Hazard Evaluations, and continue to provide telephone and written consultation on the remainder. Continue to conduct follow-up assessments through the HHE Effectiveness Evaluation Program, with periodic data analysis and production of reports. **FY 01:** Analyze and prepare first report of the HHE Effectiveness Evaluation Program.	**FY 02**: **FY 01:** Data available Fall 2001.	Page 212
NIOSH will report annual performance in conducting workplace evaluations and technical assistance visits and preparing policy and technical documents that define NIOSH policy and/or make other recommendations for employers, workers, and the health and safety community. Continued...	**FY 01:** Maintain Health Hazard Evaluation (HHE) site visits; increase number of telephone/written HHE consultations. Continue to conduct follow-up assessments through the HHE Effectiveness Evaluation Program, and prepare first written evaluation report. Continue to produce policy and technical documents on significant and emerging occupational health and safety issues to facilitate prevention of work-related injuries, illnesses, and hazards. Continue to provide comments and testimony to federal agencies on regulatory activities, as needed. Continued...	**FY 01:** Continued...	Page 212

Performance Measures	Targets	Actual Performance	Ref.
...continued. NIOSH will report annual performance in conducting workplace evaluations and technical assistance visits and preparing policy and technical documents that define NIOSH policy and/or make other recommendations for employers, workers, and the health and safety community.	...continued. **FY 00:** Decrease HHE site visits to 95 and increase technical assistance letters (see performance summary for clarification). Conduct follow-up assessments on 5% of technical assistance site visits. Continue to produce policy and technical documents on significant and emerging occupational health and safety issues to facilitate prevention of work-related injuries, illnesses, and hazards. Continue to provide comments and testimony to federal agencies on regulatory activities, as needed. **FY 99:** Establish baseline.	...continued. **FY 00**: 122 site visits conducted, 57 formal final reports published and an additional 271 (16% increase) technical assistance letters provided in response to HHE requests . Follow-up assessments were conducted on 20% of technical assistance site visits. Established the HHE effectiveness evaluation program, A question-based survey of 50% of all HHE requests. Testimony provided to3 federal agencies on 5 regulatory actions. **FY 99:** 334 HHEs completed, 100 site visits and 234 technical assistance letters. 68 technical assistance site visits (to 20 different work settings), primarily to small employers. Provided comments and testimony to 4 federal agencies on 12 regulatory activities. Major policy documents produced on topics including: Occupational exposures and cancer, TB respiratory protection in health care facilities, Preventing injuries and deaths in firefighters, and Stress at work.	Page 212

Performance Measures	Targets	Actual Performance	Ref.
Provide scientific support for public health policy development, testimony, and non-regulatory initiatives.	**FY 02**: Seek improvement. **FY 01:** Establish baseline.	**FY 02**: **FY 01:** Fall 2001.	Page 212
NIOSH will begin conducting an evaluation of the extent to which recommendations are being implemented.	**FY 01:** Reports and analysis will be completed. **FY 00:** NIOSH will begin conducting an evaluation of the extent recommendations are being implemented. **FY 99:** Two model information dissemination and training programs for key target hazards or populations (i.e., silicosis) will be designed and implemented. Working with the occupational safety and health community, develop a system for assessing/determining baseline amount, and increasing the extent NIOSH recommended exposure limits are used by employers and workers at work sites and by government agencies setting industry-wide standards.	**FY 01:** Fall 2001. **FY 00:**The FFIP conducted investigations into Firefighter fatality and published prevention and intervention activities on website. **FY 99:** Developed and implemented training curricula on electrical safety for vocational and technical education. Developed and implemented training program to prevent hearing loss among miners. Initiated evaluation of OSH practitioners use of NIOSH recommended exposure limits (RELs). NIOSH recommended control technology equipment reduced worker exposure to asphalt paving fumes by 80% (100% industry participation).	Page 212

Performance Measures	Targets	Actual Performance	Ref.
NIOSH will evaluate the effectiveness of targeted prevention programs.	**FY 02:** Continue application of lessons learned to other efforts. **FY 01:** Begin application of lessons learned to other efforts. **FY 00:** Continue intervention studies; report results of studies as completed. **FY 99:** Implement targeted evaluation of the effectiveness of a prevention program. (i.e., latex allergy, agriculture-related injuries to children) by tracking prevalence and level of exposure and behavior before and after intervention/prevention program.	**FY 02:** **FY 01:** **FY 00:** To date, nearly 1,000 hearing tests and/or noise dosimetry measurements have been performed on miners participating. "Quiet by Design" Partnerships established for major types of mining machinery. **FY 99:** Implemented intervention effectiveness studies, e.g.: model hearing loss program in various sectors (e.g., mining, industrial plants) intervention to reduce low-back pain in retail industry intervention to reduce injuries among sanitation workers	Page 212

Validation/Verification of Performance Measures: Data will be obtained from surveys conducted using a representative sample of the occupational safety and health community. Evaluation study reports for targeted intervention programs will be developed.

Performance Goal: Foster safe and healthful working conditions by providing workers, employers, the public, and the occupational safety and health community with information, training, and capacity to prevent occupational diseases and injuries.

Performance Summary

Promoting Hearing Conservation in Miners is an effort to develop effective communications tools to bring about a change in the behavior of miners with respect to noise-induced hearing loss. Implementation of this program began in FY 1999 and continues in FY 2000. The goal is to develop effective communications tools that will change behaviors of miners in their use of personal hearing protection. An evaluation of the effectiveness of this program will be occurring in FY 2001.

NIOSH delivers various types of information all products, in print and electronic form, to diverse audiences ranging from laboratory researchers to employers, workers, and the public at large. Hazard Identifications of unrecognized threats to health or safety, and alerts of hazardous conditions and prevention strategies are provided to management and labor unions, workers, and public health regulatory agencies. Technical and Surveillance Reports provide tools and information used by scientists, engineers and safety and health practitioners for research and prevention activities. Educational documents provide information for the

prevention of work injuries and illnesses, particularly targeting employers, workers, and safety and health managers without formal training in occupational safety and health.

NIOSH documents are often high in demand, providing the latest findings and recommendations to the occupational safety and health community. Similarly, the NIOSH website experiences increasing demand, posting 25% of the total information disseminated through the CDC website.

NIOSH also operates a toll-free telephone information service to assist safety and health professionals, employers, workers, and others seeking information or assistance with occupational and environmental health problems. Since 1995, the NIOSH 800 number calls have increased by 60%, from 88,432 to 141,000 in FY 2000. In FY 2000, there was a dramatic increase in inquiries about health care topics, 100 percent more than in FY 1999. During the year, three searchable databases were created to improve the tracking of 800-number requests and Web site requests. These included: (1) an electronic version of the "800-Number Resource Guide" as a searchable database, (2) a database to process and track 800-number requests and statistics, and (3) a database to track Web site requests and statistics.

In addition to these informational products, NIOSH conducts an $11.9 million training program comprised of a network of 16 regional Education and Resource Centers located at leading universities in 15 states, and 35 training project grants in 22 states and Puerto Rico funded at $2.3 million. An average of 700 students graduate annually from these NIOSH-supported programs with training in nursing, industrial hygiene and safety engineering. NIOSH estimates that approximately half of the U.S. occupational safety and health professionals graduate from NIOSH -supported programs, mostly at the masters and doctoral levels. NIOSH also funds more than a thousand continuing education courses each year, with awards to 32,659 participants in FY 2000.

Communication and training efforts continue to be an important focus at NIOSH, as we look for new, more effective ways to reach workers with the latest findings and recommendations in occupational safety and health. In FY 1999, a complete draft curriculum entitled *Electrical Safety* was readied for field study and evaluation. This training material included a text-based student manual, teacher's guide, video, overheads and evaluation instruments. The draft curriculum was field tested in 52 secondary classrooms in FL, GA, IL , MA, NY, OH, OK, and VT. Pre- and post-training data were completed by December 1999, and follow-up retention data will be ready in September 2000. Data analysis is ongoing from January through October 2000. Data analysis will be completed early FY 2001, and the prototype curriculum readied for dissemination on the basis of results of the study. The final report should be issued in FY 2001 and the results of the evaluation study will be used in articles submitted to peer-reviewed journals.

Performance Measures	Targets	Actual Performance	Ref.
Transfer of scientific and technical information to employers, workers, the public, and the occupational safety and health community.	**FY 02:** Seek improvement. **FY 01:** Baseline extent of information transferred via web-, telephone-, and print-based requests. Quarterly review of NIOSH website.	**FY 02:** **FY 01:**	Page 212

Performance Measures	Targets	Actual Performance	Ref.
Track information products and levels of information dissemination.	**FY 00:** Increase educational and informational documents to 24, produce 4 videos, and report progress on other information sources. **FY 99**: Establish baseline.	**FY 00:** ● 57 HHE reports completed ● 30 NIOSH numbered publications. ● 4 videos produced (3 distributed 1 pending clearance) ● 172,000 visitor sessions a month to Website ● 15.6 mil. hits to website ● over 141,000 Calls to NIOSH 800-number **FY 99:** 43 HHE reports completed 42 NIOSH numbered publications 12 educational documents 14.4 million Hits to Website 148,000 Calls to Hotline	Page 212
Conduct, arrange, and sponsor technology transfer and training sessions.	**FY 02:** Target will be established once baseline is established. **FY 01:** Baseline extent of technology transfer and training sessions and numbers of individuals participating.	**FY 02:** **FY 01:**	Page 212
Support capacity building activities.	**FY 02:** Seek improvement. **FY 01:** Baseline extent of technology transfer and training sessions and numbers of individuals participating.	**FY 02**: **FY 01:** Fall 2001.	Page 212

Performance Measures	Targets	Actual Performance	Ref.
Support training for occupational safety and health professionals.	**FY 01:** Continue support. **FY 00:** Continue support. **FY 99:** New measure.	**FY 01:** **FY 00:** Awarded 1 new ERC for a total of 16 in 15 states, totaling $11.9 million. NIOSH established the Heartland Center for Occupational Health and Safety at the University of Iowa for Training Program Grants $2.3 million with 35 TPG's in 22 states plus Puerto Rico. **FY 99:** $10.3 million to 15 Education and Research Centers (ERCs) in 14 states; $2.6 million to 41 Training Program Grants in 26 states and territories.	Page 212
Review a sample of new and existing documents, training materials, and communication efforts and begin implementation of findings. Continued...	**FY 01:** Continue implementation of findings. **FY 00:** Continue to review a sample of new and existing documents, training materials, and communication efforts and begin implementation of findings. Continued...	**FY 01**: Fall 2001. **FY 00:** A needlestick alert entitled "Preventing Needlestick Injuries in Health Care Settings," was distributed and was the most requested doc. in FY 2000-over 34K copies distributed. An educational video for health care workers on TB prevention was produced "Respirators: Your TB Defense". Continued...	Page 212

Performance Measure	Target	Actual Performance	Ref.
...continued. Review a sample of new and existing documents, training materials, and communication efforts and begin implementation of findings.	...continued. **FY 99:** Conduct a review of the most widely distributed existing and new training materials to ensure that they are written in plain language and are useful for the intended user.	...continued. **FY 99:** Data analyzed and preliminary results reported on an evaluation of the NIOSH latex allergy alert. Survey of 347 laboratories utilizing the *NIOSH Manual of Analytical Methods* resulted in the update of 30 analytical methods. Developed new easy-to-read *NIOSH Pocket Guide to Chemical Hazards* based upon results of focus group studies.	Page 212
Total Program Funding (Dollars in thousands)	**FY 2002:** $266,135 (Estimate) **FY 2001:** $260,134 (Final Appropriation) **FY 2000:** $226,378 (Actual) **FY 1999:** 10/2001 (Actual)		

Validation/Verification of Performance Measures: Data will be obtained from internal reviews. Efficiency and Effectiveness Ratio Evaluations will be used to compare actual results to planned results.

CDC and ATSDR coordinate activities in the area of environmental health. CDC's National Center for Environmental Health (NCEH) is responsible for providing leadership in the prevention and control of disease, birth defects, disability and death resulting from interactions between people and their environments. The mission of CDC's National Institute for Occupational Safety and Health (NIOSH) is to ensure that Americans are safe and healthy at work. By contrast, the focus of the Agency for Toxic Substances and Disease Registry is on the prevention of exposure and adverse human health effects associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution present in the environment.

2.11 Preventive Health and Health Services Block Grant

2.11.1 Program Description, Context and Summary of Performance

The PHHSBG provides funding to 61 grantees for preventive health services to reduce illness and premature deaths and improve the quality of life for all Americans. Grantees comprise all 50 states, the District of Columbia, eight Pacific Island territories, and two American Indian tribes (Santee Sioux and Kickapoo).

The grantees use PHHSBG funds to support primary prevention activities and health services that address priority health problems in local communities. Programs target major issues such as cardiovascular disease, cancer, diabetes, tuberculosis, emergency medical services, injury and violence, infectious disease, environmental health, and sex offenses. In addition, the PHHSBG supports a variety of other

activities, including clinical services, preventive screening, laboratory support, outbreak control, training, public education, and program evaluation.

The Preventive Health and Health Services (PHHS) Block Grant is not a program, and unlike other DHHS block grants which have a programmatic focus, the PHHS Block Grant permits states to choose which programs will receive funding. Because the allowable uses of the funds cover all of the objectives of Healthy People 2000, rape prevention, fluoridation, and emergency medical services, over 60 distinct programs can receive PHHS Block Grant funds. No two states allocate their block grant resources in the same way. No two states provide similar amounts of funding when they fund the same program area.

CDC is currently redeveloping the PHHS Block Grant electronic application and reporting systems to reflect the goals and objectives of Healthy People 2010. When grantees apply for PHHS Block Grant funds in FY 2001, they will be able to allocate funds to address any health objective within Healthy People 2010. Likewise, the Uniform Data Set for the FY 2001 activities will comprise state and federal data for each of the health objectives in Healthy People 2010.

The issue of measuring the performance of block grants has been addressed by the General Accounting Office (GAO) and others. GAO has examined the subject on numerous occasions, and has contacted CDC to investigate how CDC measures the PHHS Block Grant's performance under GPRA. GAO's inquiry was based on their examination of the feasibility and appropriateness of applying GPRA requirements to block grants across the government.

CDC and its partners have worked for years to develop a means for accountability under the Block Grant. CDC has considered the use of many types of general indicators including life expectancy, years of potential life lost, premature mortality, and disability adjusted life years. CDC has also looked at specific program indicators for those programs which are most commonly funded by states. Because states vary widely in the programs they support and the funding given to each program, no single indicator or group of indicators can appropriately capture what the states are doing.

States are responsible for reporting on a complete range of program data, the uniform data set, for every program supported with Block Grant funds. The uniform data sets (which correspond directly to programs) contain outcome, risk factor, and service delivery data items based on 116 health status outcome objectives contained in Healthy People 2000. The 116 health status objectives constitute a total of 8,432 data items. Beginning in FY 1999, the uniform data sets also contain GPRA performance measures for those programs which have such measures. The current measure, to increase the proportion of the data reported to CDC annually, reflects the agency's efforts to better capture the accomplishments of each state attributable to block grant funds, while at the same time addressing accountability.

Partnerships and Links to DHHS Strategic Plan

This program activity relates to the following DHHS Goals and Objectives:

- Goal 1: Reduce major threats to the health and productivity of all Americans. The PHHS Block Grant addresses all objectives within this goal.
- Goal 2: Improve the economic and social well-being of individuals, families, and communities in the United States. The PHHS Block Grant addresses Objective 2.4: Improve the safety and security of children and youth.
- Goal 3: Improve access to heath services and ensure the integrity of the nation's health entitlement and safety net programs. The PHHS Block Grant addresses Objectives: 3.6 Improve the health status of American Indians and Alaskan Natives; 3.7 Increase the availability and effectiveness of services for the treatment and management of HIV/AIDS; 3.8 Increase the availability and effectiveness of mental health care services.
- Goal 5: Improve the nation's public health systems. The PHHS Block Grant addresses Objectives: 5.1 Improve the capacity of the public health system to identify and respond to threats to the health of the nation's population; 5.2 Improve the safety of food, drugs, medical devices, and biological products.

Because the identified goals and objective coincide with Healthy People 2000 objectives, grantees may choose to fund programs addressing any of these areas. CDC compiles national and state data for each of these objectives annually in the Uniform Data Set.

Performance Summary

The Preventive Health and Health Services (PHHS) Block Grant is not a program, and unlike other DHHS block grants which have a programmatic focus, the PHHS Block Grant permits states to choose which programs will receive funding. State health departments use these critical flexible dollars to provide a wide array of functions to improve the health of all citizens. States use the flexible dollars available through the PHHSBG in the following ways.

- Rapid response to unexpected threats to the public health
- Safety net for urgent unaddressed health needs
- Incubator for new programs by providing seed money for initial support
- Bedrock to maintain essential public health systems to identify threats to the public's health and evaluate the responses to such emergencies.
- Address emerging health problems

Eighty-two percent of total required data from all programs funded by the PHHS Block Grant were reported to CDC in FY 1999, therefore, CDC exceeded its FY 1999 goal. The Block Grant FY 2000 Uniform Data Sets will not be collected until February 1, 2001. The reason for the delay is due to data sources for existing federal and state data are tabulated on a calendar year basis. The PHHS block grant supports all areas contained within Healthy People 2000. This constitutes over 116 health status outcomes within 22 chapters. The top 5 areas which states choose to fund are: cardiovascular disease, health promotion and disease prevention, emergency medical services, injury, and data and surveillance systems.

2.11.2 Goal-by-Goal Presentation of Performance

Performance Goal: Reduce preventable morbidity and mortality and improve quality of life of people within the framework of Healthy People 2000/2010 by improving the assessment capacity of prevention programs.

Performance Measure	Targets	Actual Performance	Ref.
At least 85% of total required data from all programs funded by the Preventive Health and Health Services Block grant will be reported to CDC annually.	**Percent of Required Data:** **FY 02:** At least 85%. **FY 01:** At least 85%. **FY 00:** At least 85%. **FY 99:** At least 80%.	**Percent of Required Data:** **FY 02:** 3/2003. **FY 01:** 3/2002. **FY 00:** 3/2001. **FY 99:** 82%. **FY 98:** 82%. **FY 95:** 77%.	Page 219
Total Program Funding (Dollars in thousands)	**FY 2002:** $ 135,030 (Estimate) **FY 2001:** $ 135,030 (Final Appropriation) **FY 2000:** $ 135,204 (Actual) **FY 1999:** 10/2001 (Actual)		

Verification/Validation of Performance Measure: Annual reports will be collected from each program funded in order to verify performance. The Uniform Data Sets are due from each grantee on February 1st of each fiscal year for the prior fiscal year's performance.

2.12 Public Health Improvement

2.12.1 Program Description, Context and Summary of Performance

Our Nation's health is at risk. Americans face a world of new health threats and ancient foes. Deadly diseases, once thought conquered, have reemerged in drug-resistant forms. Heart disease, cancer, diabetes, childhood asthma, obesity, and other chronic conditions now account for 70 percent of all deaths in the United States each year and for one-third of the years of potential life lost. Preventable injury and violence plague our communities. Racial and ethnic health disparities persist and widen.

Our national public health system is the first line of defense against preventable disease and disability. Virtually every health problem in our communities – infectious disease outbreaks, chemical hazards, chronic diseases, and injuries – is first recognized by local public health professionals, who must work in concert with state and national officials to control these threats, prevent spread, and save lives. Although the Nation is served by a broad range of agencies – more than 3,000 county, city, and Tribal health departments, 3,000 local boards of health, 59 State and territorial health departments, 160,000 public and private laboratories, and other public health partners – there are serious gaps in our line of defense, leaving the public health system *unprepared* and our communities *unprotected*. Recent findings demonstrate the following:

Despite steady increases and shifts in the U.S. population and an increased need for public health professionals, there has been a decline in the number of public health workers per capita in the past decade. Schools of Public Health and Preventive Medicine report that the majority of graduates do not seek employment in public health agencies. Only an estimated 44 percent of the Nation's current 448,000 public health practitioners have had formal training in public health. One-half of all public health nurses – the largest profession in public health – lack a baccalaureate nursing degree. The majority of public and private laboratory scientists lack access to continuing education and training essential to using the cascade of new, high-technology laboratory tests accurately and safely.

The Nation's *local* public health agencies perform, on average, at only an estimated 60 percent of needed capacity, with an alarming number serving minority and rural populations at far lower levels. Similarly, a study of sampled *state* health departments found performance at only 50% of needed capacity. As a result of such deficiencies, only one-third of all Americans are effectively served by public health agencies.

Accurate, timely health information is a critical component of all effective prevention and control efforts. Yet, only 55 percent of local health departments have high-speed, continuous Internet access for finding the most recent health guidelines and recommendations. Only 56 percent can successfully receive broadcast health alerts. Only 50 percent have access to community health information critical for setting priorities, taking effective actions, and tracking improvements in health status.

Effective prevention also requires solid scientific information about interventions that work in our communities, so that we can save lives and ensure that our investments are properly targeted. The asthma epidemic, for example, now afflicts 4.4 million U.S. children, causes 5,000 deaths and 500,000 hospitalizations each year, and costs an estimated $11 billion. Yet, less than a nickel of every health care dollar is spent on medical and health research, and only a fraction of this money goes to support extramural *prevention research* – that body of science aimed at *protecting our communities from disease and disability* rather than discovering "after-the-fact" cure and therapy.

Nowhere are these interventions more needed than among our nation's communities of color, whose members now represent approximately 25 percent of the general population. Strong evidence suggests that there is a persistent disparity between the health status of people of color and that of Americans overall, and that race and ethnicity correlate with continued and increasing health problems. For example, cardiovascular disease, the leading killer of all Americans, is responsible for coronary heart disease death rates 40 percent higher among African Americans than in the white population. The prevalence of diabetes is 1.7 times greater among African Americans, 1.9 times greater among Hispanics, and 2.8 times greater

among American Indians and Alaska Natives than among whites. Demographic shifts forecast for the next decade will further magnify the gaps. Reducing these disparities will require sustained prevention research to identify new knowledge about their causes and effective means of delivering preventive and clinical services; innovative ways of working in partnership with state, local, and tribal governments and communities; and testing of the effectiveness of interventions in racial and ethnic minority communities where they will have the greatest impact.

Microbes and disease vectors move around the world at jet speed, yet our public health surveillance systems still rely, in many cases, on a "Pony Express" system of paper-based reporting and telephone calls. Yet some public health laboratories – often the first public health organizations to detect a new pathogen – still report their results by surface mail, with lag times up to 10 to 14 days. Today, our nation operates some 200 separate surveillance systems, originally designed to detect a single organism or condition; lack of common standards for case definitions, laboratory confirmation, and electronic reporting result in unnecessary spread of disease.

These gaps and disparities have been highlighted in recent months, with outbreaks of West Nile virus, foodborne disease, and increasing drug-resistance and are summarized in the 2000 *CDC Report to the Senate on Public Health's Infrastructure.* In recognition of the seriousness of the problem, in November 2000, Congress passed the landmark, bipartisan ***Frist-Kennedy Public Health Improvement Act***, mandating immediate actions to remedy these deficiencies. CDC's strategy to improve public health is built on these recommendations and encompasses five approaches – a combination of ***broad-based*** efforts to build core public health capacities and ***targeted*** programs to address areas of special need:

- **Strengthening public health practice** by strengthening the major components of the **public health infrastructure** that undergirds public health: the public health workforce; public health departments and laboratories; and public health's information, communications, and knowledge management systems;
- **Stimulating extramural *prevention* research** to discover how the latest *biomedical* research can be applied in our local communities and to supply those who work on the frontlines of public health with evidence of "what works";
- **Eliminating racial and ethnic health disparities** to close serious gaps in health status by developing targeted public health interventions and testing their effectiveness in racial and ethnic minority communities where they will have the greatest impact; and
- Building the **National Electronic Disease Surveillance System** to effectively integrate disease detection and monitoring and ensure rapid reporting and followup;
- **Building cross-cutting capacities and expertise at CDC** to support key components of all categorical prevention programs.

Through these strategies – and in concert with our external public health partners – CDC is committed to improving public health at all levels.

2.12.1a Public Health Practice: Public Health Workforce

The health of America's communities hinges critically on the expertise of the national public health workforce–an estimated 448,000 physicians, nurses, environmentalists, health educators, microbiologists, managers and others who work on the front lines of public health. An estimated 80 percent of public health workers lack formal training in public health and are under prepared to respond to current, new and emerging public health threats. Studies indicate that 78 percent of the 3,000 public health officials in leadership positions nationwide lack such formal training and 60 percent of all public health nurses lack bachelor's level education. For the first time, *Healthy People 2010* identified objectives to bolster the Nation's public health infrastructure. Prominently included are the following three objectives that provide direction for national public health workforce development: (1) incorporate specific competencies in the essential public health services into local, State, federal and tribal agency personnel systems (23-8);(2) integrate specific content on the essential public health services into school of public health curriculum (28-9); and (3) provide continuing education on essential services to workers (23-10). In addition, at the

federal level, the March 9, 2000 GAO report on *Human Capital* outlines challenges associated with a decreasing federal workforce and the need for a knowledge-based cadre of federal public health workers versed in new technologies and open to life-long learning.

Many barriers prevent assuring a competent public health workforce: (1) The absence of a consensus on competency standards hampers the assessment of workforce preparedness and the development of nationally recognized comprehensive public health practice curricula to prepare the frontline to effectively eliminate or reduce health threats; (2) the workforce lacks access to an integrated public health training and continuing education system to sustain preparedness and to foster life-long learning; and (3) limited data exist regarding effective strategies for sustaining workforce preparedness and/or translating research findings into interventions at the front-lines.

Investing in the Nation's public health workforce will be accomplished through a new plan developed by CDC in collaboration with partners in local, State, federal agencies, academia, managed care, professional associations and community organizations. There are three comprehensive strategies designed to overcome the barriers: first, create a national system of Centers for Public Health Preparedness; second, establish an integrated training development and delivery system using state-of-the-art learning technology; and third, fund a program of applied research and evaluation. Building upon proven CDC public health training programs and systems such as the Epidemic Intelligence Service (EIS), the Public Health Prevention Service (PHPS) Programs, CDC Corporate University, Public Health Training Network, National Laboratory Training Network, Sustainable Management Development Program and national leadership and management development programs, implementation of a national plan will strengthen preparedness for new and emerging health threats.

Performance Summary

In FY 2000, CDC and national public health partner organizations completed the new Global and National Implementation Plan for Public Health Workforce Development (Workforce Development Plan). The plan calls for six major action steps to ensure a robust and competent workforce able to perform the essential public health services in all U.S. communities. As key parts of the Workforce Development Plan, CDC in FY 2000 initiated development of a national system of Centers for Public Health Preparedness (CPHP), funding four academic centers in Schools of Public Health and three specialty centers. These centers are key components of an integrated national system to ensure that frontline public health workers have the competencies required to effectively respond to current and emerging health threats, including emerging and re-emerging infectious diseases and bioterrorist threats. The four academic centers will implement core curriculum which support CDC categorical programs and are expected to measurably improve local public health system capacity for response through increased certification/credentialing of frontline staff. One of the specialty centers, the St. Louis University Center for Research and Education on Bioterrorism and Emerging Infections, funded in FY 2000 will focus on curricula for bioterrorism preparedness for local practicing physicians, as well as specialists in infectious disease and emergency medicine. The second specialty center, established at Dartmouth Medical School in FY 1999, will focus on applied communication technology focused on the application of computer technology and the Internet for professional continuing education/training in public health. The mission of the third specialty center, located at the Johns Hopkins University Source of Hygiene and Public Health and the Georgetown University Law Center, is to conduct training, continuing education, and applied research to improve professionals' understanding and use of law and policy as public health tools.

This national system of Centers for Public Health Preparedness is integrated with other successful CDC training programs/resources such as the Public Health Training Network, National Laboratory Training Network, National Public Health Leadership Development Network, Epidemic Intelligence Service, Public Health Prevention Specialist Program and CDC's Corporate University to ensure that new and current front line workers are prepared for 21st century public health practice.

In FY 2000, CDC increased the number of health service providers participating in distance learning activities from 135,000 in FY 1999 to 148,000. This increase was enabled through partnerships with other Federal agencies and with public health practice and academic organizations. Similarly, the number of states served by state and regional leadership development programs was increased from 32 in FY 1999

to 34 in FY 2000, two more than the target. It was possible to exceed the target because states already operating public health leadership programs could leverage their limited resources to assist new states. The number of public health professionals trained in management practices and who conduct training for public health agency managers in their home developing countries increased from 142 in FY 1999 to 159 in FY 2000, one less than the target. One of the enrolled participants in the Management in Public Health training course was unable to attend because of unforessen difficulties in obtaining a U.S. travel visa.

2.12.2a Goal-by-Goal Presentation of Performance

Performance Goal: Public health practitioners at the nation's front lines–local, state, and federal–are prepared to effectively respond to current and emerging public health threats.

Performance Measure	Target	Actual Performance	Ref.
The proportion of public health practitioners targeted by the Work Force Development Plan demonstrating competencies and level of preparedness required to respond to current and emerging public health threats.	**FY 02:** Programs implementing the Workforce Development Plan in FY 02 implement and conduct an initial evaluation of the system to identify frontline public health practitioners targeted for competency development and skill building required to respond to current and emerging public health threats. **FY 01:** Programs implementing the Workforce Development Plan in FY 01 identify frontline public health practitioners targeted for competency development and skill building required to respond to current and emerging public health threats in selected pilot areas.	**FY 02:** **FY 01**:	Page 221
The proportion of the public health workforce that completes certified training delivered via the integrated life-long learning system.	**FY 02:** Front-line public health practitioners in selected pilot areas complete certified public health preparedness training delivered via the integrated life-long learning system. **FY 01:** Development of a national collaborative public health certification and credentialing system to foster preparedness of front-line public health workers.	**FY 02:** **FY 01:**	Page 221

Performance Measure	Target	Actual Performance	Ref.
The number of public health interventions influenced by findings from applied research in workforce preparedness.	**FY 02:** Identify priority areas for applied research in public health workforce preparedness. **FY 01:** Develop an applied research agenda to strengthen the science base associated with ascertaining the impact of a competent workforce on the capacity to implement effective public health interventions.	**FY 02:** **FY 01:**	Page 221

Performance Goal: As a long-term objective, CDC will implement accessible training programs to provide an effective work force for state and local health departments and laboratories, and for ministries of health in developing countries. In FY 2002, CDC will:

- Increase the number of health service providers participating in distance learning activities;
- Increase the number of states served by state and regional leadership development programs;
- Increase the number of public health professionals trained in management who conduct training in developing countries;
- Evaluate the impact of laboratory training on laboratory practice.

Performance Measure	Target	Actual Performance	Ref.
The number of health service providers participating in distance learning activities will be increased.	**Distance Learning Participants:** **FY 02:** 125,000. **FY 01:** 120,000. **FY 00:** 115,000. **FY 99:** 105,000.	**Distance Learning Participants:** **FY 02:** **FY 01:** **FY 00:** FY 2001. **FY 99:** 148,000. **FY 97:** 100,000.	Page 221
The number of public health professionals trained in management who conduct training in developing countries will be increased.	**Persons Trained:** **FY 02:** 194. **FY 01:** 176. **FY 00:** 160. **FY 99:** 142.	**Persons Trained:** **FY 02:** **FY 01:** **FY 00:** 159. **FY 99:** 142. **FY 98:** 125.	Page 221

Performance Measure	Target	Actual Performance	Ref.
Evaluation of laboratory training programs conducted by the National Laboratory Training Network.	**Impact Evaluations:** **FY 01:** Laboratory training on the adoption of improved public health laboratory methods in rabies. **FY 00:** Laboratory training on the adoption of improved public health laboratory methods in food microbiology, tuberculosis identification, and virology. **FY 99:** Laboratory training on the adoption of improved clinical laboratory methods	**Impact Evaluations:** **FY 01:** **FY 00:** Participants reported increases in confidence levels in performing tests, communication with key public health contacts, and knowledge of CDC and other testing resources. **FY 99:** Participants from physician office laboratories reported a 71% increase in test result confidence due to training. **FY 92-98:** Evaluation of laboratory training programs conducted by the National Laboratory Training Network form 1992-1998.	Page 221
The number of states served by state and regional leadership development programs will be increased.	**States Served:** **FY 02**: 40. **FY 01:** 38. **FY 00:** 32. **FY 99:** 30.	**States Served:** **FY 02**:. **FY 01:** 40. **FY 00:** 34. **FY 99**: 32. **FY 97:** 25.	Page 221

Verification/Validation of Performance Measures: Performance for objective one will be monitored through routine evaluation of data collected by programs.

2.12.1b Public Health Practice: Public Health Departments and Laboratories

Public health organizations include a network of Federal, State, and local health departments and laboratories. Local public health is often further subdivided into categories that sort health departments by the size of the population they serve. At the larger end of the spectrum, these include large city and county health departments that serve more than 100,000 people with staffs of dozens or even hundreds of people. In rural counties, a local health department might include only a public health nurse and environmental health worker, serving 10,000 or fewer people.

State and local public health agencies, in turn, work in concert with a range of other public organizations, as well as private and not-for-profit organizations, to monitor and improve the public's health and deliver the essential services of public health. These partnerships include hospitals and managed care

organizations, community-based organizations that provide services at the local level, advocacy groups that track progress in combating particular diseases or disabilities, the research community, academia, and an array of faith, civic, and voluntary groups.

In many communities, issues such as HIV/AIDS testing, teen pregnancy prevention, immunizations, racial disparities in health outcomes, and firearm injuries are viewed not only as public health issues but as social issues on which opinions differ and a consensus on solutions is elusive. In these situations, public health organizations must draw not only on their technical skills in disease prevention and health promotion but also on talents for participating in collaborative efforts, building trust in communities, and providing objective data on health trends to policy makers and community members.

In addition, public health organizations, as stewards of the public's health, rely on regulatory authorities to enforce State and local statutes designed to protect the public's health, including inspections of restaurants, swimming pools, drinking water supplies, and environmental hazards. This feature of public health can also draw resistance from individuals and organizations.

Against this backdrop, what do we know about the performance of public health organizations? Throughout the 1990s, a number of studies tried to gauge health department performance against 20 public health practice performance measures that capture the types of activities reflected in the essential services of public health: investigating adverse health events, maintaining laboratory services, implementing public health programs, maintaining collaborative networks with other organizations, providing information to the public, collecting data about risk factors, and evaluating public health programs. In a 1998 study conducted by the University of North Carolina using these 20 measures, the Nation's largest health departments had an overall average score of only 64 percent.

Through field testing activities of the National Public Health Performance Standards Program in 2000, CDC collected extensive data from three State public health systems and 131 local public health systems on their capacity to deliver the essential public health services. The three State public health systems have performance levels of 51, 40, and 56 percent. These data are the first measures of performance of State public health systems and show that states have half or less of the organizational capacity they need to perform the essential services optimally. The average performance scores for the local public health in the three states were 55, 62, and 53 percent. While these scores indicate the local public health systems are performing at slightly higher levels than State public health systems, they are still performing very poorly.

Although other studies used slightly different methods, they yielded a consistent result: "less than optimal functioning of the public health system nationally and in many States." The studies generally showed that health departments serving larger jurisdictions performed more of these types of services than smaller health departments. Even so, the studies showed that overall, local health departments were performing somewhere between 50 and 70 percent of the services deemed essential for protecting the public's health.

Another way of looking at the performance of public health organizations is to ask, "What percentage of the American population is effectively served by its health departments?" Two national studies, also conducted during the 1990s, concluded that only a third of the U.S. population was effectively served and that the public health system could be improved.

Performance Summary

The CDC-led National Public Health Performance Standards Program is developing consensus performance measures to assess the capacity of local and State health departments and laboratories to perform the "essential public health services" that experts agree are critical to protection of the health of all Americans. Six more states and their counties will conduct field tests in FY 2001. CDC and the U.S. Department of Justice are designing standards for public health preparedness for potential bioterrorism attacks. Because performance measures must link to the goals of states and communities, the National Association of County & City Health Officials and CDC's Public Health Practice Program Office will further implementation of the new tool – *Mobilizing for Action through Planning and Partnerships* – that

communities, health professionals and their partners can use to identify health priorities, mobilize to address them, and evaluate their programs' impact. These initiatives are laying the foundation for implementation of Sections 319 A-C of the ***Frist-Kennedy Public Health Improvement Act of 2000.*** On the international front, CDC will actively consult with WHO, PAHO, and the World Bank to assist adoption of public heath performance standards globally.

In addition, CDC will begin to collect and analyze findings from four demonstration projects to test elements of the envisioned National System for Laboratory Testing of Public Health Importance in conjunction with the Association of Public Health Laboratories (APHL). The projects will increase public-private laboratory interaction and improve testing practices for specific diseases. CDC also is promoting the core functions and capabilities of state laboratories, articulated in a recent APHL consensus guideline, and is developing performance standards for State and local public health laboratories. Internationally, CDC is working to improve laboratory infrastructure in less-developed countries through the Global AIDS Program, with particular focus on quality assurance, policy development, and training in Africa and India. International projects include: creation of laboratory training programs in the Carribean region; creation of guidelines and models for national laboratory quality programs with an emphasis on HIV and TB; and promoting multi-organizational cooperation through laboratory training produced and cosponsored by five international organizations.

2.12.2b Goal-by-Goal Presentation of Performance

Performance Goal: State and local health departments and laboratories at the nation's front lines are prepared to effectively respond to current and emerging public health threats.

Performance Measure	Target	Actual Performance	Ref.
States demonstrating Improvement in laboratory testing and reporting of priority diseases	**FY 02**: 4 states **FY 01**: 4 states	**FY 02**: **FY 01**:	Page 221
Collaborative assessment of the capacity of state and local health departments and laboratories	**FY 02**: Validation of selected consensus capacity assessment instruments for dissemination to state and local health departments and laboratories **FY 01**: Pilot application and refinement of selected draft consensus capacity instruments **FY 00**: Development of selected draft consensus capacity instruments	 **FY 00**: Selected draft consensus capacity instruments developed	Page 221

Verification/Validation of Performance Measures: Performance for all objectives will be monitored through routine evaluation of data collected by programs.

2.12.1c Public Practice: Information, Communication, and Knowledge Management Systems

As with the workforce, demands on our Nation's public health information infrastructure have never been greater. Today, global travel, immigration, and commerce can move microbes and disease vectors around the world at jet speed, yet our public health surveillance systems still rely, in many cases, on a time-consuming, resource-intensive "Pony Express" system of paper-based reporting and telephone calls.

In our day-to-day world of pagers, cell phones, and frequent e-mail communication between everyone from kindergartners to grandparents, it is sobering to consider the current status of public health's data and information systems. In 1999, CDC and the National Association of County and City Health Officers conducted an e-mail test to see how quickly local health departments could be contacted in the event of a health alert or bioterrorist emergency. In this test, only 35 percent of CDC's e-mails were delivered successfully, for a variety of reasons. Some public health laboratories – often the first to detect a new pathogen – still report their results by surface mail, with lag times up to 10 to 14 days.[i]

In a February 1999 survey of local health departments, CDC found that only 45 percent had the capacity to send broadcast facsimile alerts (i.e., multiple "faxes" sent simultaneously to labs, physicians, State health agencies, CDC, or others). Similarly, fewer than half had high-speed continuous access to the Internet, and 20 percent lacked e-mail capabilities.

Lack of access to communication networks is not the only issue of concern. In response to a 1998 survey about infrastructure problems, a local health department confessed to not reporting diseases because doing so would have meant a long-distance phone call.

These gaps in the basic information infrastructure are troubling because not only do they prevent public health agencies from communicating with each other in a timely manner, but they also hinder communication between public health staff, private clinicians, or other sources of information about emerging health problems.

These basic communication gaps also exacerbate other problems, particularly the existing fragmentation of surveillance systems and the variability between various jurisdictions in terms of their communication infrastructure. A strong and responsive communication and surveillance system cannot realize its full public health potential if some jurisdictions lack the skills and/or technology to detect and report emerging problems. The public health surveillance system is a network that simply cannot perform its protective function if its detection and reporting capacity is uneven.

Performance Summary

Several recent infusions of funding and attention have begun to address some of these problems.

CDC is leading the development of Web-based systems to translate collected data and scientific findings into practical information for health professionals and the public. One of these systems is the CDC Prevention Guidelines Database, an online repository of all CDC intervention and treatment guidelines available on CDC's Internet Web Site. This system is currently the single most accessed feature of CDC's online information and is being revised and expanded to incorporate new prevention research findings and to leverage new interactive Web capabilities. Complementing this system is the Public Health Image Library, a unique online gallery of scientific photographs, electronic images, stored video, and other objects representing significant public health visual information. This gallery is currently being populated with images from a wide range of CDC and public health partners and will be expanded in FY 2001. A third system, the Health Alert Network, is a major component of CDC's Bioterrorism Initiative, and is serving the "dual use" of providing a platform for rapid electronic communications for bioterrorist events as well as for other health threats. When fully deployed, the network will link local health departments to each other, with other local agencies critical to emergency response, to State health departments, to CDC, and to other federal agencies. Functionally, the network will support an "early warning and response" system, rapid communication and response coordination, rapid communication of laboratory disease test results, distance-based training delivered to public health workers' desktops, as well as the National Electronic Disease Surveillance System application described below.

In FY 1999, with congressional support and funding, CDC launched the national Health Alert Network to improve information access and training for local health departments. A total of 40 sites—37 States and 3 large cities—have now been funded to begin **basic** implementation of Internet connectivity, broadcast communications, and distance-learning capacity at the local level. In addition, 3 local health departments have been funded as "Centers for Public Health Preparedness" to develop more advanced applications for sister agencies nationwide. The Network is being jointly developed by local, State, and Federal partners, and initial implementation is progressing successfully in the funded sites. Resources for the Health Alert Network activities are provided through the CDC Bioterrorism initiative described in Section 2.15 of this performance plan.

2.12.2c Goal-by-Goal Presentation of Performance

Performance Goal: State and local health departments are able to electronically access and distribute up-to-date public health information and emergency health alerts, monitor the health of communities, and assist in the detection of emerging public health problems.

Performance Measure	Target	Actual Performance	Ref.
Expand front-line public health practitioners' access to Internet based, CDC-approved public health practice guidelines, scientific/disease reference images, health and medical data, and information on the effectiveness of public health interventions.	**FY 02**: Continue implementation of plan **FY 01**: Initiate implementation of plan **FY 00**: Develop plan for continuous review and enhancement of online, CDC-approved information resources	**FY 02**: **FY 01**: **FY 00**: Plan developed; new and enhanced guidelines, images and other resources added	Page 221

Verification/Validation of Performance Measures: Performance for all objectives will be monitored through routine evaluation of data collected by programs.

2.12.1d Extramural Prevention Research

Americans bear a heavy burden of death and disability that can be prevented through population-based prevention research. Minorities bear a disproportionate burden but all Americans feel the impact in our health, in accelerating health care costs, and in diminished economic productivity.

Here are just a few examples:

- Cardiovascular disease (CVD), including heart disease and stroke, is the leading U.S. cause of death for all groups. If all CVD were prevented, U.S. life expectancy would rise by nearly 7 years, compared to only 3 years for elimination of all cancers.
- Work-related injuries kill 6,200 and disable over 3,000,000 annually -- with a total economic cost estimated at $145 billion in 1992. Suicide was the eighth leading cause of death in 1997 and the third leading cause for teens and young adults in the age group 15-24, killing over 30,000.
- Birth defects -- many of them preventable -- are directly responsible for 8,000 infant deaths each year and contribute to 1,000 more.
- Finally the Nation's 500,000 public health professionals lack the proven "best practices" and "prevention tools" they need to identify health threats, design hard-hitting community and population-based interventions, and deliver them through strong State and local health departments, health care organizations, community-based organizations, and many other partners.

Less than 2 percent of the Nation's health care budget goes to population-based disease prevention and health promotion, even though CDC research shows that 70 percent of premature mortality is related to factors

amenable to a population-based prevention approach. Research!America polls conducted in 1999 show that 66 percent of the public wants population-based prevention research. But, in contrast, only a tiny fraction of the national health research budget supports such research.

Partnerships and Links to DHHS Strategic Plan: These performance measures are related to DHHS Goal 6: Strengthen the nation's health sciences research enterprise and enhance its productivity through the Prevention Research Initiative.

Performance Summary

Initiated in 1999 with a $15 million appropriation, the Extramural Prevention Research Program sponsors peer-reviewed research by experts in the field who are linked with State and local health agencies to develop improved interventions and services. CDC received 300 applications in response to the request for proposals supported by the $15 million funding level. At present, 52 extramural research projects (17.3 percent of the applications) are in progress, addressing an important but necessarily limited set of research priorities. Extramural investigators are located in leading schools of public health, medical schools, State health departments, and other academic and practice-based organizations. Translation of research findings into information, guidelines, and tools for front-line public health practitioners is an integral part of the program and will be facilitated through existing and new partnerships between CDC's Public Health Practice Program Office and public health practice organizations. In addition to supporting high-priority prevention research projects, the Extramural Prevention Research Grants Program is a focal point for CDC's extramural research partners, aids development of practice-oriented CDC prevention research agendas, promotes use of rigorous peer-review processes for extramural research, and facilitates dissemination of research findings and translation of findings into action.

The FY 1999 funding supported grants for fifty extramural research projects, most for a term of three years. All awards were made following rigorous external peer review. Funds made available from projects with shorter terms supported three additional research grants in FY 2000. Awards were made to academic research institutions in twenty-one states and all ten Department of Health and Human Services regions. Institutions receiving awards included academic health centers, schools of public health, and university-affiliated programs (e, g., teaching and research affiliates of medical schools including health departments and managed care organizations.) Awards were also made to support research in academic engineering, communications, public policy, and nursing institutions. Approximately 83 percent of all appropriated funds was awarded extramurally. The balance supported program operations and administration (scientific personnel, design of peer-review mechanisms and research grant administration.)

In FY 2002 the Extramural Prevention Research Grants Program will make new grants using the new mechanisms designed and implemented in the first stage of the initiative. At the $15 million level, CDC will make an estimated 25 new prevention research grants. Emphasis will be given to the priorities identified in the CDC research agendas developed in FY 1999-2001 in collaboration with the extramural scientific community, public health professionals, and communities disproportionately affected by preventable disease and disability. Special emphasis will be placed on disseminating the discoveries and findings of completed research projects to community, State, and federal public health practitioners, helping achieve the most important goal of the program, that is, translating the results of prevention research into front-line action for improved health.

2.12.2a Goal-by-Goal Presentation of Performance

A. Goals for FY 2002

Prevention research performance goals for FY 2002 appear immediately below and constitute the goals for the second stage of the prevention research initiative, the stage that follows the design and priority setting activities of the first stage of the initiative, FY 1999-2001. The performance goals for the earlier stage appear in section B below, together with a crosswalk to the FY 2002 goals.

Performance Goal 1: Develop improved approaches for preventing or delaying the onset or progression of disease and disability.

Performance Measure	Target	Actual Performance	Ref.
Facilitate development of improved, population-based prevention interventions	**FY 02:** Progress in developing improved, population-based interventions	**FY 02:**	Page 221
Increase participation by advisory groups and multi-disciplinary collaborative teams in setting research priorities.	**FY 02**: Expanded participation in research priority setting by advisory groups and multi-disciplinary collaborative teams.	**FY 02:**	Page 221

Verification/Validation of Performance Measures: Data for these measures will be available from analyses and reports by the CDC Office of Extramural Prevention Research.

Performance Goal 2: Disseminate research findings to improve adoption of effective public health practice and community interventions.

Performance Measure	Target	Actual Performance	Ref.
Dissemination of prevention research findings to public and private health organizations.	**FY 02:** Assess existing methodologies for disseminating research findings to public and private health organizations.	**FY 02:**	Page 221

Verification/Validation of Performance Measures: Data for this measure will be produced by CDC Office of Extramural Prevention Research analysis of existing dissemination programs.

Performance Goal 3: Evaluate the adoption and impact of prevention research on public health practice and the health of the public.

Performance Measure	Target	Actual Performance	Ref.
Monitor adoption of prevention research-based interventions.	**FY 02:** Develop a system to monitor adoption of prevention research-based interventions	**FY 02:**	Page 221

Performance Measure	Targets	Actual Performance	Ref.
Evaluate the impact of prevention research-based interventions	**FY 02:** Assess existing methodologies for evaluating the impact of research-based interventions	**FY 02:**	Page 221

Verification/Validation of Performance Measures: Data for these measures will be available from reports by the CDC Office of Extramural Prevention Research.

B. Goals for FY 1999-2001

Performance Goal: CDC will strengthen its ability to obtain and disseminate extramural research findings to partners, public health practitioners and the public through a Prevention Research Communications program.

Performance Measure	Targets	Actual Performance	Ref.
CDC will develop a longitudinal studies research agenda, including identification of specific studies to be conducted, with involvement of the broader research and practice communities. These studies will be designed in order to provide timely data relevant to prevention research and intervention programs.	**FY 00:** Complete an inventory of existing and completed longitudinal studies covering multiple health domains. Also convene a meeting to develop a research agenda for a program of longitudinal studies for possible funding by CDC.	**FY 00:** Provided funding for research development.	Page 221
CDC will develop reporting mechanisms and communication strategies to assure that results from these studies will stimulate new and improved interventions to prevent disease.	**FY 01:** Communication strategies and targets will be assessed for efficacy and "reach" to specific audiences. **FY 00:** CDC extramural research communications plan developed, approved and executed.	**FY 01:** **FY 00:** Extramural research communications plan has been developed and approved. The execution phase of the project to be completed July, 2001. **FY 99:** Zero reporting mechanisms or communication strategies.	Page 221

Verification/Validation of Performance Measures: Examination of written reports and documents showing reporting mechanisms and communication strategies. Reviews of published documents including journal articles, mass media, and other reports.

Performance Goal: Increase collaboration among academic health centers, public health departments, managed care organizations and other public health organizations to develop, implement, and evaluate the effectiveness of community-based public health interventions.

Performance Measure	Targets	Actual Performance	Ref.
Increase partnerships between academic health centers, managed care organizations, and the public health networks in the Nation's communities to support prevention research.	**FY 00:** Organize a workgroup of CDC Director's Advisory Committee. **FY 99:** CDC will provide periodic briefings to members of CDC Advisory and Scientific Committees on opportunities to increase partnerships.	**FY 00:** Advisory Committee met in Feb. 2000 to develop recommendations on research priorities **FY 99:** Provided briefings to 3 advisory and scientific committees. Participated in meetings with CDC programs, other federal agencies, and external scientific organizations to describe the Prevention Research Initiative, to encourage collaboration in CDC's extramural prevention research, and to alert partners of funding availability.	Page 221
Increase the "hit rate" for investigator-initiated research projects (excluding unsolicited requests for funding).	**FY 00:** Develop standard operating definition for CDC "hit rate". Assess the number of PRI applicants receiving notice of "ABU" approved peer-review projects that were unfunded in FY 1999.	**FY 00:** Operating definition developed and "hit rate" determined to be 17% for FY 99. **FY 99:** No baseline data exists regarding "hit rate" for investigator-initiated projects.	Page 221
Increase the number of organizations receiving notices of availability of PRI funds.	**FY 00:** Pilot test "e-grants" system which provides comprehensive information and tools for extramural programs seeking funds for research. Assess dissemination patterns for announcing research opportunities to scientific community.	**FY 00:** CDC will pilot agency-wide e-grants system in FY 01, as Program deferred to Agency standard..	Page 221

Verification/Validation of Performance Measures: Data and information will be obtained through progress reports from contractors and partners working on "e-grants" and research communications plan; reviews of correspondence and inquiries from applicant organizations' hits to websites containing funding announcements; and if available, data from CDC Procurement and Grants Office (PGO).

Performance Goal: Increase input of external scientific community on extramural prevention research.

Performance Measures	Targets	Actual Performance	Ref.
CDC will increase the use of external peer review in processes for competitive research awards of funds (cooperative agreements, and grants) for projects, especially those receiving full or partial support through the Prevention Research Initiative.	**FY 00:** 100% of PRI extramural funds will be externally peer reviewed (Targets: 75% through Special Emphasis panels and 25% through established Study Sections.) Number of Special Emphasis panels used overall at CDC will increase. **FY 99:** CDC will increase the use of external peer review in processes for competitive research awards of funds for projects supported with prevention research funding.	**FY 00:** Fully Achieved. 100% of PRI extramural funds were externally peer reviewed using Special Emphasis Panels. **FY 99:** 100% of PRI-funded extramural projects were subject to external peer review. Number of Special Emphasis panels used for CDC funding decisions increased from 5 to 25. **FY 98:** Baseline: 5 Special Emphasis Panels.	Page 221
CDC will promote the use of research advisory groups and multi-disciplinary collaborative teams to develop and conduct research.	**FY 01:** Progress in promoting (or facilitating the promotion of) the use of research advisory groups and multi-disciplinary collaborative teams to set research priorities. **FY 00:** Establish goals for use of research advisory groups and collaborative teams on projects, programs, and priorities. Use results of FY 99 research advisory ("infrastructure") projects to inform directions for future extramural research partnerships and programs. **FY 99:** CDC will promote the use of research advisory groups within the agency.	**FY 01:** **FY 00:** Achieved. CIO's and ATSDR have research agendas. **FY 99:** PRI funds will be made available for external assessment and review and advisory projects in 8 CIOs and ATSDR.	Page 221

Performance Measures	Targets	Actual Performance	Ref.
CDC continues to support a subcommittee for extramural research chartered through the CDC Advisory Committee.	**FY 00:** CDC continues to support a working group for extramural research chartered through the CDC Advisory Committee with at least two meetings in FY 2000. Implement procedures to charter a working group as a prevention research subcommittee of CDC Advisory Committee. **FY 99:** CDC continues to support a subcommittee for extramural research chartered through the CDC Advisory Committee.	**FY 00:** Workgroup met January and August 2000 to review and recommend research priorities and overall direction. **FY 99:** The actual charter for the subcommittee will be obtained in FY 2000. Until then, a working group of Committee members and key representatives from academic fields will advise the Director.	Page 221

Verification/Validation of Performance Measures: Data for these measures will be available from information obtained from CIO program announcements, strategic plans, and Federal Register announcements. Data will be verified using data obtained through site visits with the grants management office and reports to CDC's Committee Management program.

Performance Goal: Disseminate research findings and other relevant information from prevention research programs to public health practitioners, managed care organizations, and consumer groups.

Performance Measures	Targets	Actual Performance	Ref.
Research findings will be disseminated by investigators receiving PRI funds.	**FY 01:** Implement tracking and display results on website. **FY 00:** Establish dissemination goals for PRI-funded projects and methods for collection of data, including the number of published peer-reviewed studies and the number of products developed and distributed to consumers.	**FY 01:** **FY 00:** Developed initial design and plan for implementing a website. Dissemination goals for PRI funded projects: 80% of awards will have submitted results for publication within 1 year of study completion. **FY 99:** Developed initial design and plan for a website.	Page 221

Performance Measures	Targets	Actual Performance	Ref.
Distribute information on availability of research findings.	**FY 01:** Establish website with highlights of selected PRI-funded studies and linkages to CIOs websites on projects, where available. **FY 00:** Establish website with highlights of selected PRI-funded studies and linkages to CIOs websites on projects, where available.	**FY 01:** **FY 00:** Developed initial design and plan for implementing a website. Contract awarded for development of website to be complete by March, 2001. **FY 99:** Developed initial design and plan for implementing a web site.	Page 221

Verification/Validation of Performance Measures: Data for these measures will be available from grantee applications for new/continuation funds, grantee progress reports and bibliometric studies. Data be verified through site visits and published reports.

Performance Goal: Strengthen the scope and nature of extramural public health research programs.

Performance Measures	Targets	Actual Performance	Ref.
CDC will increase the number of young investigator and public health research training opportunities.	**FY 00:** CDC will increase by 5% the number of career development awards funded by PRI.	**FY 00:** Continued funding 2 career development awards. With level funding in FY 2000, we were not able to increase the number of awards. **FY 99:** Two extramural projects and one "infrastructure" project funded to support expanded training activities.	Page 221

Performance Measures	Targets	Actual Performance	Ref.
CDC will expand the scope of public health research to multi-disciplinary research efforts, which in turn are able to bridge the gaps between public health practice, public health research, bio-ethics, and health policy research.	**FY 00:** CDC will expand the scope of public health research to multi-disciplinary research efforts, which in turn are able to bridge gaps between public health practice, public health research, bio-ethics, and health policy research. **FY 99:** CDC will expand the scope of public health research to multi-disciplinary research efforts, which in turn are able to bridge gaps between public health practice, public health research, bio-ethics, and health policy research.	**FY 00:** Accomplished through funding of public health law projects to address policy research. **FY 99:** CDC funded projects with multi-disciplinary teams of scientists. CDC funded 2 career development awards through Prevention Research Centers. CDC funded a review of existing prevention research training programs to determine gaps and identify specific programs and courses that CDC might support.	Page 221

Verification/Validation of Performance Measures: Data for these measures will be available from program announcements, Federal Register announcements, grantee progress reports, and reports to the CDC Director on CDC-funded training programs. Data will be verified through site visits.

Performance Goal: Increase collaboration efforts focusing on innovative intervention methods that provide results to state, local and community-based organizations through CDC's Prevention Research Centers Program and prevention research demonstration projects.

Performance Measures	Targets	Actual Performance	Ref.
Research communications plan will be developed and implemented to assure rapid diffusion of information on interventions, outcomes, scope and methods to public and private public health organizations. All grantees will be subject to annual assessments of their work to disseminate findings/best practices. Continued...	**FY 01:** At least three recommendations related to diffusion of findings will be implemented. **FY 00:** Key recommendations from research communications will be available for review and comment by organizations and other Federal agencies. Project officers will be required to conduct the first annual assessment of grantee dissemination activities and outcomes. Continued...	**FY 01:** **FY 00:** Research communications plan revised and will be available for review by March, 2001. Progress report will be requested October, 2000. Continued...	Page 221

Performance Measures	Targets	Actual Performance	Ref.
...continued. Research communications plan will be developed and implemented to assure rapid diffusion of information on interventions, outcomes, scope and methods to public and private public health organizations. All grantees will be subject to annual assessments of their work to disseminate findings/best practices.	...continued.	...continued. **FY 99:** No plan for assessment and review of research dissemination and diffusion activities.	Page 221
CDC will track and analyze diffusion and dissemination activities for all PRI extramural and intramural projects.	**FY 01:** Progress in tracking and analyzing diffusion and dissemination activities for all PRI extramural and intramural projects. **FY 00:** Initial monitoring of diffusion and dissemination activities will be performed using media monitoring and bibliometric services. This shall provide baseline data for projects funded in FY 1999.	**FY 01:** **FY 00:** Not accomplished. Program priority change.	Page 221

Verification/Validation of Performance Measures: Data for these measures will be available from annual inventory of PRI-funded projects; reports from CDC project officers; grantee progress reports; external information systems (media monitoring and bibliographic/metric); and will be verified through interviews with managers.

2.12.1e(1) Eliminating Racial and Ethnic Disparities: REACH 2010

One of the Nation's highest Healthy People 2010 goals is to eliminate, by 2010, disparities in six areas of health status experienced by racial and ethnic populations while continuing the progress we have made in improving the overall health of the American people. The health status areas targeted in this initiative are infant mortality, deficits in breast and cervical cancer screening and management, cardiovascular disease, diabetes, HIV infection/AIDS, and child and adult immunizations.

Compelling evidence that race and ethnicity correlate with persistent, and often increasing, health disparities among U.S. populations demands national attention. Indeed, despite significant progress in the overall health of the Nation, as documented in *Health, United States*-the annual report card on the health status of the American people-there are continuing disparities in burden of illness and death experienced by African-Americans, Hispanics, American Indians and Alaska Natives, and Asian-Americans and Pacific Islanders, compared to the U.S. population as a whole. The demographic changes that are anticipated over the next decade magnify the importance of addressing disparities in health status. Racial and ethnic groups will increase in upcoming

decades as a proportion of the total U.S. population; therefore, the future health of America as a whole will be influenced substantially by our success in improving the health of these populations. A national focus on disparities in health status is particularly important as major changes unfold in the way in which health care is delivered and financed.

Eliminating racial and ethnic disparities in health will require new knowledge about causes of health disparities, enhanced efforts at preventing disease, innovative methods of promoting health and delivering culturally competent and linguistically specific preventive and clinical services. Accomplishing this goal will require obtaining new information, particularly the data to identify populations at high risk, and to monitor the effectiveness of health interventions targeting these groups. Research dedicated to a better understanding of the relationships between health status and different racial and ethnic minority backgrounds will help us acquire new insights into eliminating the disparities and developing new ways to apply our existing knowledge toward this goal. Improving access to quality health care and the delivery of preventive and treatment services will require working more closely with providers to deliver preventive and clinical services, and with communities to obtain community "consent" for community participation to identify needs, and plan and conduct research.

CDC leads interagency working groups charged with significantly reducing health disparities in health access and outcomes in the following areas: Cancer Screening and Management; Cardiovascular Disease; Diabetes; HIV Infection/AIDS; Infant Mortality; and Child and Adult Immunizations.

Often the underlying causes of increased levels of disease and disability among racial and ethnic minorities include poverty, lack of adequate access to quality health services, failure to receive preventive or "state-of-the-art" health care, and the need for effective prevention programs tailored to specific community needs. For example:

- Although African-American and Hispanic persons represent 21 percent of the country's population, more than half of the AIDS cases reported to CDC have been among these minority populations. Among children, the contrasts are more dramatic with African-American and Hispanic children representing 84 percent of pediatric AIDS cases in 1996.

Cardiovascular disease is the leading cause of death for all racial and ethnic groups in the United States. In 1996, coronary heart disease mortality was 40 percent higher for African Americans compared with rates for whites.

Vietnamese women in the United States have a cervical cancer incidence rate more than five times greater than white women (47.3 vs. 8.7 per 100,000). African-Americans have a cancer death rate about 35 percent higher than for whites.

Among persons 65 years of age and older who had one or more physician visits in the past year, both influenza and pneumococcal vaccination levels among African-Americans and Hispanics are substantially lower than those of whites.

Partnerships and Links to DHHS Strategic Plan

These performance objectives are related to DHHS Goals 1: Reduce major threats to the health and productivity of all Americans. Development and implementation of the plan to Eliminate Ethnic Health Disparities is an inter-agency effort within DHHS. CDC has been collaborating with other federal agencies including Office of Public Health and Science, Office of Minority Health, Assistant Secretary of Planning and Evaluation, Agency for Health Care Research and Quality, and Health Resource Services Administration (HRSA) in developing and implementing this initiative. Specific objectives for implementation of the initiative must be determined through a collaborative inter-agency process.

Performance Summary:

Through a highly coordinated DHHS Departmental effort, CDC has launched the Racial and Ethnic Approaches to Community Health (REACH 2010) Program. Demonstration Projects are two-phase projects whose purpose is for communities to mobilize and organize their resources in support of effective and sustainable programs which will eliminate the health disparities of racial and ethnic minorities. These demonstrations require

collaboration of both program and research experts for the purpose of identifying and/or developing successful community-based disease prevention and health promotion models that can be replicated for the ultimate goal of eliminating health disparities among racial and ethnic minorities. The six health priority areas being targeted by REACH 2010 in which racial and ethnic minorities experience serious disparities include: Infant Mortality, Deficits in Breast and Cervical Cancer Screening and Management, Cardiovascular Diseases, Diabetes, HIV Infections, and Child and/or Adult Immunizations. The FY 1999 budget included $10 million for CDC to support 32 communities for Phase I activities. The planning activities have included establishing infrastructure for community-level data collection, establishing collaborative partnerships, establishing linkages with other state and local agencies, and working with federal agencies and other partners to identify "best practices" and program activities which will underlie intervention activities.

In FY 2000, community coalitions developed their Community Action Plans. Some proposed activities include: (General Access) locating permanent sources of health care closer to under-served communities; establish breast cancer education programs in senior centers and retirement communities with access to preventive services and support; reducing financial barriers for community members to participate in physical activity (e.g., subsidize fees for parks, recreation, fitness classes); increasing access to low-cost or free early and adequate prenatal care; and establishing and supporting peer educator programs in youth organizations, middle schools, and high schools to encourage healthy living skills.

Some proposed activities to address diabetes include: providing guides in local restaurants that describe the health meal alternatives offered; distributing low-fat menus and recipes at local supermarkets tied to current sales items offered by local retailers; and offering awareness seminars about Type II diabetes at local senior centers and retirement communities. Proposed activities to address infant mortality include providing grants to agencies that will provide training and services in preconception counseling to reduce risk for low birth weight and infant death. Activities specific to breast and cervical cancer include providing incentives (e.g., reduced insurance premiums) to women who routinely get mammography and pap smear tests. Proposed activities specific to cardiovascular diseases include: providing zoning, tax rebates, and other financial incentives to encourage the use of land for recreational purposes.

REACH 2010 is a demonstration project, the goal of which is to contribute to eliminate health disparities experienced by racial and ethnic minorities by the year 2010. As a demonstration project, outcomes measures are critical in order to show that strategies developed can and did make a difference to communities served and to many other communities through technology transfer. Phase I activities include the development of evaluation measures by each project.

Performance measures will be developed in each of the six health priority areas. CDC, with input from the grantees and collaborators, has developed an evaluation model that can be used to guide the collection of data at the national level to assist with the local data collection efforts. In FY 2001, CDC anticipates working with two evaluation contractors to collect process and outcome data from REACH 2010 grantees. CDC will also select from several options for comparison communities. The most likely of these are the use of new questions added to current BRFSS data collection tools. CDC has provided funding through the Prevention Research Center at the University of South Carolina to manage a Special Interest Project (SIP). This particular SIP was designed to inform the evaluation process for REACH 2010 and other projects aimed at eliminating health disparities, through the formation of a Blue-Ribbon panel of experts tasked to develop evaluation guidance documents. Membership of the panel includes universities (some racial and ethnic minority universities), community-based organizations, and public and private sector organizations. The evaluation documents developed by this Blue Ribbon panel will be useful in developing appropriate performance measures for GPRA.

In FY 2000, CDC funded 24 Phase II projects, 14 Phase I projects and 4 new projects serving the elderly through an interagency agreement with the Administration on Aging. In FY 2001, CDC anticipates funding a limited number of Phase II grantees, new AI/AN grantees and applied research projects. In FY 2001, planning (Phase I) communities are establishing infrastructure to support community-level data collection, establishing collaborative partnerships (e.g., state and local health departments, community organizations, and academia), establishing linkages with other state and local agencies, and working with federal agencies and other partners to identify promising prevention strategies that have the greatest potential for reducing the health disparities in the target populations.

Implementation and evaluation (Phase II) communities currently are implementing their Community Action Plans. Phase II grantees also are evaluating community interventions and outcomes of the project. CDC is supporting the development of a blue ribbon panel support network. The primary goal of this network is to make evaluation available and accessible to the community-based initiatives.

With the budget increase received in FY 2001, CDC also will conduct the following activities:

Provide funding to American Indian/Alaska Native organizations for programs to reduce health disparities.
Award six additional implementation and evaluation (Phase II) grants.
Conduct applied research projects to study social indicators and other underlying causes of health disparities.

2.12.2e(1) Goal-by-Goal Presentation of Performance

Performance Goal: To achieve meaningful improvement in the lives of racial and ethnic populations who now suffer disproportionately from the burden of disease and disability. To develop the necessary tools and strategies that will enable the Nation to meet the far more challenging goal of eliminating these health disparities by the year 2010.

Performance Measure	Targets	Actual Performance	Ref.
CDC will fund selected communities to implement interventions based on community planning activities to eliminate racial and ethnic health disparities for following focus areas: breast and cervical cancer screening and management, cardiovascular disease, diabetes, child and/or adult immunizations, HIV/AIDS, and infant mortality.	**FY 02:** CDC will provide continuation funding to Phase II grantees. CDC will also announce the availability of finding for new intervention phase coalitions. **FY 01:** CDC will provide continuation funding to Phase II grantees. CDC will also announce the availability of funding for new intervention phase coalitions. **FY 00:** CDC will fund selected communities to implement interventions (Phase II) based on community planning activities. CDC will also fund 4-6 additional Phase I grantees.	**FY 02:** **FY 01:** **FY 00:** 14 coalitions were funded for Phase I, and 25 coalitions were funded for Phase II.	Page 123
Continued...	Continued...	Continued...	

Performance Measure	Targets	Actual Performance	Ref.
...continued. CDC will fund selected communities to implement interventions based on community planning activities to eliminate racial and ethnic health disparities for following focus areas: breast and cervical cancer screening and management, cardiovascular disease, diabetes, child and/or adult immunizations, HIV/AIDS, and infant mortality.	...continued. **FY 99:** CDC will develop a community planning RFA & fund a community to conduct planning activities (Phase I) for community-based demonstrations of prevention and service delivery for the following focus areas: breast and cervical cancer screening and management, cardiovascular disease, diabetes, child and/or adult immunizations, HIV/AIDS, and infant mortality.	...continued. **FY 99:** 32 coalitions were funded for Phase I.	Page 123

Verification/Validation of Performance Measures: Grantees will report on the development of implementation and evaluation plans which will be reviewed by CDC staff. FY 2000 measures will also be evaluated by site visits. For FY 2001, data will be acquired by the CDC grant reporting system. No data lags are expected.

2.12.1e(2) Eliminating Racial and Ethnic Disparities: Improving the Health of American Indians and Alaska Natives

Healthy People 2000 progress reviews of the health needs of AI/AN identified disparities between this group and the general population in 14 priority areas and focused attention on the need for disease prevention and health promotion initiatives and strategies to reduce the health disparities. For example:

Infant Mortality is 1 ½ times higher for Native Americans compared to whites. SIDS deaths are three to four times as high for some AI/AN populations.

Diabetes - Native Americans suffer at nearly three times the average rate, and at least one tribe, the Pimas of Arizona, have the highest known prevalence of diabetes of any population in the world. Rates of diabetes related complications are also higher among AI/AN.

Cancer - Alaska Native men and women suffer disproportionately higher rates of cancers of the colon and rectum than do whites. AI/AN women also have low rates of screening and treatment for breast and cervical cancers.

CVD - Rates for regular screening for cholesterol are very low – only 50 percent of AI/AN have had their cholesterol checked within the past 2 years.

Unintentional Injury - Age-adjusted death rates from homicides, suicides, and unintentional injuries for AIs/ANs in IHS service areas are higher than the total population.

Overweight prevalence (48% for AIs/ANs v. 29% for total population in 1993), and cirrhosis deaths (21.6 per 100,000 AIs/ANs v. 8 per 100,000 for total population further exemplify the serious health problems of this population.

In FY 2000, activities will be conducted in conjunction with the REACH 2010 Program (Racial and Ethnic Approaches to Community Health). A description of REACH 2010 is found in Section 2.13.1a.

On May 4, 1999, members of the Budget Review Board hosted the first budget consultation meeting with Tribal Leaders. Tribal representatives made specific budgetary requests of the Department and various OPDIVs. The

CDC recommendations are related to surveillance and epidemiology, Preventive Health, HIV, STD, health promotion, hepatitis, diabetes, infant mortality, breast and cervical cancer, heart disease, violence and injury prevention.

Eliminating Health Disparities in AI/AN people will require enhanced efforts to prevent disease, promote health and assure appropriate care. CDC will support the Department's efforts to improve American Indians/Alaska Natives (AI/AN) access to federal programs to prevent disease, promote health and assure appropriate care. Core Capacity Grants ranging from $75,000 to $200,000 will be awarded to 8 - 10 AI/AN organizations to address health priorities, gaps in prevention, and service delivery interventions for their proposed communities. Funds will be awarded to the following AI/AN organizations: Tribal organizations representing more than one tribe; Tribal projects with three or more collaborating tribes; Urban Indian Health Programs; Indian Health Boards; and Inter-Tribal Councils. Applicants will be encouraged to apply for funds for at least one focus area where the disparity is 25 percent or greater between the general population and AI/AN. This approach will allow CDC and tribal leaders and organizations to prioritize health disparities throughout Tribal areas.

These grants are aimed at:

Improving the lives and health status all AI/AN who suffer disproportionately from the burden of preventable disease and disability;

Enhancing the collection of standardized data to correctly identify AI/AN populations and tribes and monitor the effectiveness of health interventions targeting these groups; and

Develop strategies and tools to reduce health disparities AI/AN and the total population.

Partnerships and Links to DHHS Strategic Plan
These performance objectives are related to DHHS Goals 1: Reduce major threats to the health and productivity of all Americans. Development and implementation of the plan to Eliminate Ethnic Health Disparities is an inter-agency effort within DHHS. CDC will collaborate with other federal agencies, who will be determined later, in developing and implementing this initiative. Specific objectives for implementation of the initiative must be determined through a collaborative inter-agency process.

Performance Summary
Performance assessment will begin in FY 2001.

2.12.2e(2) Goal-by-Goal Presentation of Performance

Performance Goal: To achieve meaningful improvement in the lives of American Indian and Alaska Native populations who now suffer disproportionately from the burden of disease and disability. To develop the necessary tools and strategies that will enable the Nation to meet the far more challenging goal of eliminating these health disparities by the year 2010.

Performance Measure	Target	Actual Performance	Ref.
CDC will support AI/AN organizations to address health priorities, gaps in prevention, and service delivery interventions for their proposed communities.	**Funded organizations:** **FY 02:** 5. **FY 01:** 5.	**Funded organizations:** **FY 02:** 8/2002. **FY 01:** 8/2001. **FY 99:** 0 Baseline	Page 123

Verification/Validation of Performance Measures: The measure will be verified by the CDC grant reporting system.

2.12.1f National Electronic Disease Surveillance System (NNDSS)

CDC is building a national integrated surveillance system. This system allows rapid reporting of disease trends to control outbreaks. It creates public and private health care sector linkages to increase the volume, accuracy, completeness, and timeliness of the data available for disease monitoring. Finally, this new system provides local health departments with Internet access to permit rapid sharing of information on infectious disease outbreaks or bioterrorist incidents.

Through NNDSS, CDC is: (1) Developing and implementing national data standards for surveillance and reporting; (2) Providing technical infrastructure support for state and local communities and (3) Establishing local, state, and regional demonstration projects that create linkages between the public health and health care systems. These efforts are increasing the speed and reliability of data collection and, consequently, enhancing CDC's ability to protect the public from infectious disease outbreaks and bioterrorist attacks. They are being implemented in consultation with stakeholders in the process. IN addition to ongoing discussions with the Council of State and Territorial Epidemiologists, CDC continues to seek input from state and local stakeholders, including a meeting scheduled in April 2001 to discuss the overarching framework for public health data needs, as it plans and develops system components. Initial funding for NNDSS was appropriated in 2000 through the Public Health and Social Services Emergency Fund. In FY 2001, approximately $29 million was awarded to continue development of the NNDSS network of networks.

Performance Summary

Goals for FY 2000 in all areas were met. Funding was made to 12 states for element development and 2 states to be charter states, which means they are in the process of development of the full system. There are 10 states that are currently transmitting laboratory results electronically. Data standards are currently under review with the intention of implementing the Base System in 2 states for pilot testing in FY 2001. Funding in FY 2000 should enable 80% of states to transmit secure surveillance data to CDC in FY 2001. In FY 2000, the Secure Data Network (SDN) was developed for CDC which has enabled 80% of surveillance systems to implement the transmission of case-level surveillance data using the SDN in FY 2001.

2.12.2f Goal-by-Goal Presentation of Performance

Performance goal: Improve the public health surveillance infrastructure by developing national data standards for surveillance, providing technical infrastructure support to state and local communities, and establishing a demonstration project linking health care to public health.

Performance Measure	Targets	Actual Performance	Ref.
Pilot projects will be conducted to develop and test electronic linkages between public health agencies and the health care sector (note: Projects funded under the Infectious Diseases line are reported there).	**FY 02:** 10 States with linkages to managed care, hospitals, or other clinical providers. **FY 01:** 5 states with linkages to managed care, hospitals, or other clinical care providers. **FY 00:** 1 state with linkages to managed care, hospitals, emergency departments or other clinical care providers.	**FY 02:** **FY 01:** **FY 00:** 14 states were funded to do element development to build capacity to link with managed care, hospitals, or other health care providers. **FY 99:** 0 projects.	Page 221
Electronic Laboratory Reporting (ELR) used by States.	**States using ELR:** **FY 02:** 30. **FY 01:** 15. **FY 00:** 10.	**States using ELR:** **FY 02**: **FY 01:** **FY 00:** 10 (baseline).	Page 221
National data standards for surveillance and reporting will be developed including standard data definitions and a common user interface and system architecture; and a secure pipeline for reporting surveillance data.	**FY 02:** Common data standards will be implemented. **FY 01:** Common data standards will be pilot tested. **FY 00:** Common data standards will be identified and reviewed by partners	**FY 02:** **FY 01:** **FY 00:** Data standards are currently under review. **FY 99:** Multiple systems which do not possess uniform standards or a common user interface.	Page 221

Performance Measure	Targets	Actual Performance	Ref.
Increase the percentage of state-based CDC-developed surveillance systems which have implemented enhanced security measures for reporting the bulk reporting of surveillance data	**FY 02:** 100% of systems. **FY 01:** 80% of systems **FY 00:** 20% of systems	**FY 02:** **FY 01:** **FY 00:** Projects to be funded 9/30/00. **FY 99:** 10% of systems.	Page 221
Increase the percentage of CDC-developed web-based surveillance systems which have implemented enhanced security messages for transmission of case-level data over the Internet.	**FY 02:** 100% of systems. **FY 01:** 80% of systems. **FY 00**: 20 % of systems.	**FY 02:** **FY 01:** **FY 00:** Secure data network (SDN) developed for CDC. **FY 99:** 10% of systems.	Page 221
Funding (Dollars in thousands)	**FY 2002:** $ 109,910 (Estimate) **FY 2001:** $ 110,889 (Final Appropriation) **FY 2000:** $ 91,713 (Actual) **FY 1999:** 10/2001 (Actual)		

2.13 Buildings and Facilities

2.13.1 Program Description, Context and Summary of Performance

CDC's management has the responsibility to ensure that: (1) CDC has adequate facilities and equipment to carry out its public health mission; (2) all facilities, particularly laboratories, must be safe for both workers and the community; (3) the taxpayers' investment in these facilities is protected through effective maintenance and operations; (4) facilities meet applicable fire and life safety codes; and, (5) all CDC facilities are operated in a responsible manner to reduce energy consumption.

Beginning in 1993, the Agency undertook a master facilities planning effort to identify and systematically address severely inadequate facilities conditions at our Clifton Road and Chamblee Campuses in Atlanta Georgia. In this process, CDC has assessed the work that would be needed to consolidate its Atlanta operating into two secure campuses, and properly maintain existing facilities; CDC continues to update this assessment to ensure that the appropriate needs receive the highest priority.

CDC uses the assessments from this facilities planning effort and its annual Repair and Improvements (R&I) Plan to determine the need for and schedule major and minor renovation, construction, and other facilities projects. CDC's facilities goals are to provide safe, modern, efficient, and physically secure laboratories and support facilities in the most economical manner possible.

Links to DHHS Strategic Plan:
These performance measures relate to DHHS Goal 5: Improve the Nation's public health systems and Goal 6: Strengthen the Nation's health sciences research enterprise and enhance its productivity.

Performance Summary

As of December 2000, implementation of approved projects is proceeding substantially according to schedule, with adjustments to reflect actual authorization and appropriations.

Organizational and structural changes to CDC's facilities organization continue to be implemented. For example, the old Engineering Services Office has been reorganized into three specific organizations with targeted areas of concentration – planning & project management, design and construction management, and property management and operations – to make more efficient use of time and money.

CDC has implemented the first part of an innovative new contracting structure to speed up the procurement of major capital projects under the master plan. Under this structure, CDC will use a highly competitive process to "pre-qualify" architecture and construction firms to form a "pool" of resources readily available to CDC to use on a task order basis for design and construction. To date, CDC has successfully procured design services for two major new construction projects in approximately one-third to one-quarter of the time normally needed for traditional A/E procurements. Another feature of the contract is to bring the architect and builder together from the inception of a project rather than after the design is complete. CDC believes this feature could result in a better final product, reduced change orders, and better adherence to project budget and schedule. CDC will be monitoring projects currently entering the design and construction cycle to obtain quantitative data on the above-mentioned performance objectives.

Section 2.13.2 provides more specific information at the project level.

2.13.2 Goal-by-Goal Presentation of Performance

Performance Goal: Implement the scheduled improvements, construction, security, and maintenance consistent with available resources and priorities identified in CDC's master facilities planning process.

Performance Measure	Targets	Actual Performance	Ref.
Construct Phase II of Building 17, Infectious Disease Research Lab, Clifton Road Facility.	**FY 01:** Complete construction. **FY 00:** Construct Phase II of Building 17.	**FY 01:** **FY 00:** Construction remains on schedule and on budget, with the building structure in place up to the 3rd floor. **FY 99:** Construction remains on schedule and on budget, with the building structure in place up to the 3rd floor. **FY 98:** Planning Stage.	Page 231

Performance Measure	Targets	Actual Performance	Ref.
Design and construct new infectious disease lab, Building 18, at Clifton Road Campus, to vacate and modernize existing Building 1 South, house Bioterrorism, and additional BSL 4 capacity.	**FY 02:** Continue construction. **FY 01:** Complete design. **FY 00:** Begin design.	**FY 02:** **FY 01:** The project currently on schedule at DD phase. **FY 00:** Acquisition of the A/E Contract is well underway with task order awarded for Building 18 anticipated in 2000. **FY 99:** Acquisition of the A/E Contract is well underway with task order award for Building 18 anticipated in 2000. **FY 98:** Planning stage.	Page 231
Begin design of Scientific Communications Center to replace existing Building 2, and vacate and modernize existing Building 3, Clifton Road Campus.	**FY 02:** Complete design. **FY 01:** Begin design. **FY 00:** A/E and CMC contract acquisition..	**FY 02:** **FY 01:** Design is slightly behind schedule at Concept Development phase. **FY 00:** Acquisition of the A/E and CMC Contracts is complete. **FY 99:** Completed POR to develop detailed program, location, budget, and implementation strategy. **FY 98:** Planning stage.	Page 231
Complete construction of infectious disease lab Building 109 to replace existing buildings 4, 6,7,8 and 9, Chamblee Campus.	**FY 01:** Complete construction. **FY 00:** Begin construction.	**FY 01:** **FY 00:** Acquisition of the construction contract is well underway with task order award for Building 109 anticipated in 2000. **FY 99:** Design is underway and is expected to be complete on schedule and with budget this FY. **FY 98:** Planning stage.	Page 231

Performance Measure	Target	Actual Performance	Ref.
Complete construction of infrastructure project in Security Buffer Zone, Clifton Road Campus.	**FY 01:** Complete construction. **FY 00:** Complete infrastructure construction.	**FY 01:** **FY 00:** Construction temporarily delayed. **FY 99:** Property acquisition and demolition is 99 percent complete. Initial infrastructure work is underway ahead of schedule. **FY 98:** Planning stage.	Page 231
Design and construct environmental health lab Building 110 to replace existing buildings 17, 25, 31, and 32, Chamblee Campus.	**FY 02:** Begin construction; complete design. **FY 01:** Begin design.	**FY 02:** **FY 01:** **FY 98:** Planning stage.	Page 231
Begin design of New Headquarters Building 21, Roybal Campus, for Lease Consolidation Project.	**FY 02:** Complete design. **FY 01:** Begin design.	**FY 02:** **FY 01:** **FY 98:** Planning stage.	Page 231
Continue construction of Phase II of Building 17, Infectious Disease Research Lab, Clifton Road Facility.	**FY 01**: Complete construction.	**FY 01:** **FY 98:** Planning stage.	Page 231
Begin design of Building 106, Chamblee Campus, for Lease Consolidation Project.	**FY 02:** Complete design; Begin construction. **FY 01:** Begin design.	**FY 02:** **FY 01:** **FY 98:** Planning stage.	Page 231
Total Program Funding (Dollars in thousands)	**FY 2002:** $150,000 (Estimate) **FY 2001:** $175,000 (Final Appropriation) **FY 2000:** $ 57,131 (Actual) **FY 1999:** 10/2001 (Actual)		

Verification/Validation of Performance Measures: Data will be collected through contractor reports and on-site verification.

2.14 Office of the Director

2.14.1 Program Description, Context and Summary of Performance

The Office of the Director (OD) manages and directs programs of the Centers for Disease Control and Prevention (CDC) by providing leadership, advice on policy matters, development of goals and measures in the implementation of CDC's responsibilities related to disease prevention and control, and evaluates CDC's progress toward program goals and performance measures. OD provides direction and coordination to the epidemiologic activities of CDC and coordinates CDC's response to public health emergencies. OD provides overall direction to and coordination of the scientific/medical programs of CDC; plans, promotes, and coordinates an ongoing program to assure equal employment opportunities in CDC; provides direction and training on matters of scientific integrity and human subjects protections; and promotes technology transfer to benefit the public's health. It provides leadership, coordination, and assessment of administrative management activities and oversees security for the CDC laboratory and office facilities. OD establishes, administers, and coordinates CDC's health communication and media relations policies in a manner to ensure that health communication efforts reflect the scientific integrity of all CDC research, programs, and activities, and that such information is factual, accurate, and targeted toward improving public health.

In addition, OD coordinates and manages programs on global health activities, minority health, and women's health relating to disease prevention and control.

The OD has developed goals and performance measures in the areas of health communication, program planning and evaluation, scientific integrity and human subjects protections, technology transfer, health and safety, and equal employment.

Health and Communication: Communicating public health information to practicing health care providers, public health professionals, health researchers, policy makers, legislators, and the general public is one of CDC's core processes that is common to all of CDC's public health areas. The overall federal policy to make information readily available to the public, the importance of providing information to individuals and health care providers to make better informed health and prevention decisions, and the rapid expansion of electronic access to information through the Internet and other means are driving factors for leveraging electronic communication avenues for health communications.

Program Planning and Evaluation: CDC's Office of Program Planning and Evaluation (OPPE) is responsible for leading and coordinating a diverse range of activities for the Office of the Director, as well as across CDC's CIOs, Departmental Operating Divisions, and with DHHS. These activities include:

- Leading CDC's efforts to implement the Government Performance and Results Act (GPRA),
- Managing the agency's one-percent evaluation program,
- Coordinating CDC's information collection activities and submissions to the Office of Management and Budget (OMB), and
- Setting CDC's budget priorities.

The Associate Director for Science: CDC's Office of the Associate Director for Science (ADS) is responsible for providing direction and training on matters of scientific integrity and human subjects protections for the CIOs. ADS also manages CDC's intellectual property (e.g., patents, trademarks, copyrights) and promotes the efficient transfer of new technology forthcoming from CDC research to the private sector, to facilitate and enhance the development of diagnostic products, new research methods, vaccines, and other products, and methods that improve occupational safety.

Equal Employment Opportunity: The Office of Equal Employment Opportunity (OEEO) is responsible for advising senior management on their roles and responsibilities in EEO and Civil Rights programs. We also serve as a resource for managers, supervisors, union officials, the Human Resource Management Office (HRMO), the Office of General Council (OGC), and the Department of Health and Human Services (DHHS) and other Operating Divisions (OPDIVs) on EEO. In support of this effort, OEEO will: provide prompt, fair, and impartial processing of complaints; conduct a continuing campaign to eradicate every form of prejudice or

discrimination; make written materials available to all employees and applicants informing them of the equal employment opportunity program; and establish a system for periodically evaluating the effectiveness of the agency's overall equal employment opportunity effort. Our civil rights responsibilities require that we develop and issue internal policy guidance on the implementation of nondiscrimination statues in agency programs and/or activities.

In fulfilling our mission, we impact on the quality of work life for all employees by ensuring that we have an environment that values the contributions of each individual and a diverse work force that reflects the populations we serve. In accordance with EEOC guidelines, OEEO manages an accountability system for achieving the agency's EEO objectives by enhancing the recruitment efforts to ensure a diverse applicant pool, and by providing continuous EEO training for all employees; early intervention and resolution of EEO matters; and a comprehensive report to enhance management's performance under the EEO program.

Minority Health: Continuing disparities in the burden of illness and death exist for the Nation's minorities: African Americans, Hispanic or Latinos, Asians, Pacific Islanders, American Indians, and Alaska Natives. Supporting evidence-based policy and public health action, enhancing effective internal and external partnerships, implementing disease prevention and health promotion initiatives, and enhancing internship and fellowship opportunities are some of the strategies undertaken to improve the health of these minorities and eliminate health disparities.

Performance Summary

Health Communication: First report will be for FY 2001.
Program Planning and Evaluation: First report will be for FY 2001.
Associate Director for Science: In FY 2000, a broad range of activities were carried out by the Office of the Associate Director for Science. These activities included the provision of training and technical assistance for staff throughout CDC on scientific integrity, including scientific ethics; and technology transfer policies and procedures. .

The number of new employee invention reports has been increasing each year over the last several years, e.g., from 29 in FY 1998 to 34 in FY 1999 to 45 in FY 2000. This reflects the recent efforts of the Technology Transfer Office to make increasingly clear to CDC's scientists and research managers the benefits to the agency and to the individual scientists of recognizing and pursuing invention rights in CDC research results.

The increasing use of the Cooperative Research and Development Agreement (CRADA) to foster productive collaborative research with private companies and universities also reflects this success. The number of new CRADAs has increased steadily over the last few years as well to an agency high of ten new CRADAs initiated this year. CDC is currently a partner in 28 active CRADAs, generating approximately one million dollars of non-appropriated funds for the cooperative research. Several of these have been renewed one or more times, indicating that the benefits to both the agency and the companies are well recognized.

Companies continue to recognize the value of CDC research and intellectual property rights. CDC executed five new patent license agreements this year, up from two last year. Of particular import is the ongoing development under license from CDC of a new vaccine against the bacterium that causes otitis media, an all too common, expensive, and sometimes debilitating disease of children. License revenues for this fiscal year were $346,530, a substantial increase over last years revenue of $100,110. These revenues were used to provide incentives to the inventors and to support additional laboratory research.

Training sessions to instruct CDC investigators on regulations, policies, and procedures to protect human subjects in research were held in Atlanta and Alaska. Twenty-six classes were held for principle investigators to help them work within the IRB process. Several workshops were held that trained 120 IRB members on regulations, policies, and procedures. Presentations on the protection of human subject were presented to the CDC Procurement and Grants Office, the Epidemic Intelligence Service incoming class, Emerging Infectious Disease Fellows, and the MN Department of Health

Equal Employment Opportunity: First report will be for FY 2001.
Minority Health:

The FY 1999 performance goal to develop mechanisms to support Historically Black Colleges and Institutions, Hispanic-Serving Institutions, and Tribal Colleges was achieved through the award of a cooperative agreement. The number of schools reached through this mechanism will not be available until February 2001. The FY 2000 target to enroll 57 students in three summer training programs (which are designed to encourage minority students to pursue graduate careers in public health) was achieved; however two students left the program prior to completion due to personal reasons.

CDC increased the number of funding mechanisms in FY 2000 to include 2 cooperative agreements. In FY 1999, the number of schools supported by these funding mechanisms exceeded the 27school target by 10 schools. This increase is due to CDC's efforts to expand and diversify partnerships with learning institutions and to enhance recruitment opportunities. Based on these encouraging results, CDC has increased the target for the number of participating schools from 30 to 37 in FY 2001.

In FY 2001, CDC will continue to develop new partnerships with Historically Black Colleges and Institutions, Hispanic-Serving Institutions and Tribal Colleges. These new partnerships will expand training opportunities and increase the pool of students eligible for graduate careers in public health.

2.14.2 Goal-by-Goal Presentation of Performance

Performance Goal: Provide leadership and coordination for a broad range of support activities across CDC.

Performance Measure	Target	Actual Performance	Ref.
Develop and provide technical assistance/consultation for CDC staff.	**FY 02:** Two training sessions for CIO GPRA staff provided annually. Training materials/manuals for OMB Clearance made available via OPPE Intranet site. Technical assistance provided to all recipients of 1% evaluation funds. **FY 01:** Two training sessions for CIO GPRA staff provided annually. Training materials/manuals for OMB Clearance made available via OPPE Intranet site. Technical assistance provided to all recipients of 1% evaluation funds.	**FY 02:** **FY 01:** **FY 99:** One training session provided for CIO GPRA staff. OMB Clearance materials developed, and available electronically via individual request. Guidance documents for development of statements of work revised and electronically available to requesters.	Page 237

Performance Measure	Target	Actual Performance	Ref.
Coordinate the development and timely submission of Reports to Congress and OMB Clearance packages.	**FY 02:** Reduce by 10% the number of outstanding Reports to Congress. Reduce OPPE review time for clearance packages to 10 days. **FY 01:** Reduce by 10% the number of outstanding Reports to Congress. Reduce OPPE review time for clearance packages to 10 days.	**FY 02:** **FY 01:** **FY 99:** OPPE review time for OMB clearance packages 15 days. Inventory of outstanding Reports to Congress developed.	Page 237

Performance Goal: Ensure effective identification, evaluation, and protection of novel technologies.

Performance Measure	Target	Actual Performance	Ref.
Increase technology transfer education and awareness activities. This includes, but is not limited to, dissemination of CDC TTO policies, procedures, and guidelines that promote disclosure of inventions, appropriate patent protection, and potential public health benefits of licensing CDC technologies.	**FY 02:** Conduct 10 education and awareness activities. **FY 01:** Conduct 10 education and awareness activities. **FY 00:** Conduct 7 education and awareness activities.	**FY 02:** **FY 01:** **FY 00:** Exceeded Target with10 education and awareness activities. **FY 99:** 2 educational activities conducted.	Page 237
Increase the number of Employee Invention Reports (EIRs) filed per year.	**FY 02:** 50 EIRs filed. **FY 01:** 50 EIRs filed. **FY 00:** 35 EIRs.	**FY 01:** **FY 00:** 45 EIRs filed. **FY 99:** 31 EIRs filed.	Page 237

Performance Measure	Target	Actual Performance	Ref.
Increase the number of patent applications filed per calendar year (includes both foreign and domestic).	**FY 02:** File 79 applications. **FY 01:** File 79 applications. **FY 00:** File 76 applications.	**FY 02:** **FY 01:** **FY 00:** Filed 72 patent applications. **FY 99:** Filed 73 patent applications.	Page 237
Increase the number of patents issued per year (includes foreign and domestic).	**FY 02:** 24 patents issued. **FY 01:** 24 patents issued. **FY 00:** 23 patents issued.	**FY 02:** **FY 01:** **FY 00:** 22 patents issued. **FY 99:** 22 patents issued.	Page 237
Review and manage CDC patent portfolio to maximize return for public health benefit.	**FY 02:** See Change Chart. **FY 01:** Less than 30 percent of unlicenced patents are being maintained by CDC beyond 4 years from the date of issue. **FY 00:** Less than 30 percent of unlicenced patents are being maintained by CDC beyond 4 years from the date of issue.	**FY 01:** **FY 00:** "Note" New evaluation must be completed due to recent receipt of a large number of mining patent files transferred to CDC from the old Bureau of Mines. Early estimate is now 70% of unlicenced patents are being maintained beyond 4 years of issue date. **FY 99:** 38% of CDC's unlicenced patents are being maintained beyond 4 years from the date of issue.	Page 237

Performance Goal: Encourage commercialization of unique technologies.

Performance Measure	Target	Actual Performance	Ref.
Market all available licensing opportunities for CDC's intellectual property, and update availability of new technologies on a quarterly basis.	**FY 02:** Conduct/publish 10 marketing update activities. **FY 01:** Conduct/publish 10 marketing update activities. **FY 00:** Conduct/publish 7 marketing update activities.	**FY 02:** **FY 01:** **FY 00:** Oct. 99, established the "Pink Dot" licensing service link between the IBM patent search engine and the CDC TTO website. -TTO website updated Dec. 99. -New CDC Technology published in FR on 12.6.99. -Marketed CDC technologies at BIO2000 in Boston. -Marketed CDC capabilities at AAAC in San Francisco. **FY 99:**TTO home page was established on the CDC website. Technologies were published semi-annually in the *Federal Register*.	Page 237
Increase in the number of patent license agreements (PLAs) executed annually by CDC.	**FY 02:** 3 PLAs executed. **FY 01:** 3 PLAs executed. **FY 00:** 3 PLAs executed.	**FY 02:** **FY 01:** **FY 00:** 5 PLAs executed. **FY 99:** 2 PLAs executed.	Page 237

Performance Measure	Target	Actual Performance	Ref.
New case evidence, at least annually, of CDC licenses providing a substantial basis for the development of commercially significant products and processes.	**FY 02:** 10% growth in royalties received from patent licenses. **FY 01:** 10% growth in royalties received from patent licenses. **FY 00:** 10% growth in royalties received from patent licenses.	**FY 02:** **FY 01:** **FY 00:** $346,530 received. **FY 99:** $110,110 total royalties received.	Page 237
Increase in CDC outreach activities through participation in national and international research, trade, and technology transfer meetings and conferences.	**FY 02:** TTO will participate in 5 events to market CDC technologies. **FY 01:** TTO will participate in 5 events to market CDC technologies. **FY 00:** TTO will participate in 5 events to market CDC technologies.	**FY 02:** **FY 01:** **FY 00:** Achieved. **FY 99:** TTO participated in 2 major marketing events (i.e., AACC and BIO99).	Page 237

Performance Goal: Promote private sector participation and investment in applications of novel research discoveries.

Performance Measure	Target	Actual Performance	Ref.
Increase the number of executed CRADAs, Material Transfer Agreements, Clinical Trial Agreements, and other kinds of CDC-private sector research cooperation mechanisms.	**FY 02:** 5% increase from previous year. **FY 01:** 5% increase from previous year. **FY 00:** 5% increase from previous year.	**FY 02:** **FY 01:** **FY 00**: 10 CRADAs executed. **FY 99:** 6 standard CRADAs executed.	Page 237

Performance Measure	Target	Actual Performance	Ref.
Increase the number of EIRs arising from cooperative research with the private sector.	**FY 02:** See Change Chart. **FY 01:** 5% increase from previous year. **FY 00:** 5% increase from previous year.	**FY 01:** **FY 00:** 0 EIRs. **FY 99:** 0 EIRs.	Page 237

Performance Goal: Increase knowledge and practice of human subjects protection in research among public health scientists.

Performance Measure	Target	Actual Performance	Ref.
Increase Institutional Review Board (IRB) approvals following no more than one report from the CDC IRB.	**FY 02:** Increase to 98% approval. **FY 01**: Increase to 97%. approval. **FY 00:** Increase to 96% approval.	**FY 02:** **FY 01**: **FY 00:** 96% approval. **FY 99:** 95% approval.	Page 237
Increase the number of states with assurances of compliance and IRBs.	**FY 02:** 50 states. **FY 01:** 40 states. **FY 00:** 30 states.	**FY 02:** **FY 01:** **FY 00:** 15 states. **FY 99**: 13 states.	Page 237

Performance Measure	Target	Actual Performance	Ref.
Scientists at CDC will receive computer-based training in Scientific Ethics.	**FY 02:** All CDC scientists will pass the computer-based training on Scientific Ethics. **FY 01:** 80 % of all CDC scientists will pass the computer-based training on Scientific Ethics. **FY 00:** All CDC scientists engaged in human subjects research will pass the computer-based training in Scientific Ethics.	**FY 02:** **FY 01:** **FY 00:** 16.5% of CDC scientists have passed the computer-based training in Scientific Ethics. The total CDC staff who have passed the training is now 35%. **FY 99:** 18.5% of CDC scientists passed the computer-based training in Scientific Ethics.	Page 237

Performance Goal: Enhance agency recruitment efforts to ensure the availability of applicant pools that include highly qualified minorities, women, and persons with disabilities.

Performance Measure	Target	Actual Performance	Ref.
Increase our participation in the Agency's recruitment activities with HBCUs, HACUs, Tribal Colleges & Universities, President's Council on Persons with Disabilities and build and expand other external partnerships.	**FY 02:** Increase participation by 30%. **FY 01:** Increase participation by 20%.	**FY 02:** **FY 01:** 6 sessions **FY 00:** 5 sessions.	Page 237

Performance Goal: Provide continuing EEO and diversity training to managers, supervisors, and employees.

Performance Measure	Target	Actual Performance	Ref.
Increase the opportunities for EEO Training for CDC/ATSDR workforce.	**FY 02:** Increase training by 20%. **FY 01:** Increase training by 20%.	**FY 02:** **FY 01:** 19 sessions **FY 00:** 16 sessions	Page 237

Performance Goal: Through early intervention and ADR, prevent an increase in the number of EEO complaints.

Performance Measures	Target	Actual Performance	Ref.
Decrease the number of complaints in the inventory.	**FY 02:** 10% reduction of complaints. **FY 01:** 10% reduction of complaints.	**FY 02:** **FY 01:** 67 **FY 00:** 75	Page 237

Performance Goal: To provide a tool to measure CIO performances and management accountability under the EEO Program.

Performance Measure	Target	Actual Performance	Ref.
Develop and disseminate an EEO report to each CIO quarterly.	**FY 01:** Quarterly dissemination.	**FY 01:** **FY 00:** N/A	Page 237

Performance Goal: Administer minority student training programs that are designed to enhance the professional capacity of minority students and encourage them to pursue graduate level careers in public health.

Performance Measure	Target	Actual Performance	Ref.
Increase the number of minority students participating in three summer training programs: Project: IMHOTEP, Public Health Summer Fellowship Program, Ferguson Infectious Disease Fellowship Program.	**FY 01:** 59 students. **FY 00:** 57 students. **FY 99:** 57 students.	**FY 01:** **FY 00**: 55 students. **FY 99:** 55 students. **FY 98:** 59 students.	Page 237

Verification/validation of performance measures: Demographic data are compiled for all training programs annually.

Performance Goal: Through grants and cooperative agreements, develop mechanisms to support Historically Black Colleges and Institutions, Hispanic-Serving Institutions and Tribal Colleges and Institutions.

Performance Measure	Target	Actual Performance	Ref.
Increase the number of funding mechanisms and number minority-serving institutions receiving support.	**FY 02:** **FY 01:** 3 cooperative agreements and 37schools. **FY 00:** 2 cooperative agreements and 27 schools. **FY 99**: 1 cooperative agreement and 22 schools	**FY 02:** **FY 01:** **FY 00:** 2 cooperative agreements; Data for # of schools will be available 4/2001. **FY 99:** 1 cooperative agreement and 37 schools. **FY 98:** 1 cooperative agreement and 20 schools.	Page 237
Total Program Funding (Dollars in thousands)	**FY 2002:** $ 49,440 (Estimate) **FY 2001:** $ 41,521 (Final Appropriation) **FY 2000:** $ 39,085 (Actual) **FY 1999:** 10/2001 (Actual)		

2.15 Bioterrorism

2.15.1 Program Description, Context and Summary of Performance

As scientific and technological advances increase the ease with which individuals are able to access and weaponize biological and chemical agents, the potential for bioterrorism continues to threaten the health of the U.S. public. Furthermore, factors such as genetic engineering, relationships among foreign states, and a immunity to smallpox in the U.S. population contribute to this nation's certain vulnerability to terrorism. Agents, such as smallpox, anthrax, and viral hemorrhagic fevers like Ebola, are agents of concern to the public and healthcare providers because they have the potential to invoke mass casualties before the agents are even detected or identified. The inability to precisely predict the perpetrator, agent, or target of bioterrorism necessitates overall local, state, and federal preparedness for response to a bioterrorism incident.

Preparing the nation to address the dangers of biologic and chemical terrorism is a major challenge to public health and health care systems. Early detection requires increased awareness among members of the medical community, who are in the best position to report suspicious illnesses and injuries, and improved linkages between the health care and public health communities. In addition, state and local health agencies require an enhanced capacity to detect and investigate unusual events and unexplained illnesses, and diagnostic laboratories need to be equipped to identify biological and chemical agents that are rarely seen in the United States. State and local entities must also be trained to receive and distribute the contents of an established pharmaceutical stockpile in the event of a biological or chemical terrorism attack. Fundamental to these efforts is comprehensive, integrated planning and training designed to ensure core competency in the primary elements of public health preparedness for bioterrorism and a high degree of scientific expertise among local, state, and federal partners.

CDC established the Bioterrorism Preparedness and Response Program to coordinate a national effort to protect

the public's health in the event of a biological or chemical terrorist attack. This program is a cross-cutting effort which incorporates expertise and participation from various Centers, Institutes and Offices throughout CDC. CDC will continue to provide leadership and coordination for this national capacity building effort with particular emphasis on the following program areas: preparedness planning, response, surveillance and epidemiology capacity, biologic and chemical laboratory capacity, and electronic communications. These efforts are conducted in collaboration with a variety of federal, state and local partners who provide a broad scope of perspectives and capability.

CDC is committed to building federal capacity for bioterrorism preparedness and response, however, state and local programs comprise the foundation of an effective national strategy for bioterrorism preparedness and response. By strengthening the state and local infrastructure for prevention and control of infectious diseases and detection of chemical agents, nationwide preparedness for bioterrorism will be enhanced. To this end, cooperative agreements have been established with 50 states, 4 cities, and 1 U.S. territory to help upgrade their capabilities to counter bioterrorism threats through one or more of the following program areas: 1) development or maintenance of a statewide bioterrorism preparedness plan and ongoing assessment of capabilities, needs and resources; 2) detection and investigation of infectious disease outbreaks as well as rapid collection, analysis and dissemination of incident data; 3) rapid laboratory diagnosis of biologic agents and chemicals; and 4) development of state-of-the-art information technology, implementation of data management and communications systems, and rapid dissemination of information via mechanisms such as the Health Alert Network. The table below briefly describes the number of recipients for each focus area as well as their primary goals. The goal of 75 recipients for most focus areas includes all 50 states, approximately 15 major metropolitan areas, and a variety of other partners such as hospitals, health maintenance organizations, academic institutions and professional associations. Due to the complex nature of measuring chemical agents in the human body, only 5 states will be funded to build laboratory capacity for detecting chemical terrorism. These 5 state public health laboratories augment CDC's chemical terrorism laboratory capacity.

Activities accomplished to date are described in the Performance Summary.

	# of Grantees Funded	Major Goals/Activities
Upgrading State and Local Capacity: Preparedness & Response	11 Goal: 75	Coordinate development and implementation of state and local plans to address public health issues related to a potential biologic or chemical terrorist attack.
Upgrading State and Local Capacity: Surveillance & Epidemiology Capacity	55, including 8 which focus on "special" or enhanced work in this area Goal: 75	Enable state and major city health departments to enhance, design, or develop systems for rapid detection of unusual outbreaks of illness that may be the result of bioterrorism. Funds will allow state and local health departments and their collaborating healthcare facilities to develop and implement surveillance, case-reporting protocols and capability to conduct epidemiologic investigations.

	# of Grantees Funded	Major Goals/Activities
Upgrading State and Local Capacity: Laboratory Capacity - Biologic Agents	43 Goal: 75	Ensure that core diagnostic capabilities for bioterrorist agents are available at state and major city public health laboratories. Funds will allow state or major city labs to be able to conduct rapid and accurate diagnostic and reference testing for select biologic agents likely to be used in a terrorist attack.
Upgrading State and Local Capacity: Laboratory Capacity - Chemical Agents	5 Goal: 5	Ensure that rapid methods are available to address a chemical terrorism incident to measure chemical agents in blood and urine of persons exposed or potentially exposed. Funds will allow state public health labs to acquire and maintain state-of-the-art diagnostic capabilities for chemical agents likely to be used by terrorists.
Upgrading State and Local Capacity: Health Alert Network/Training	40 Goal: 75	Establish and maintain a network that will: a) support exchange of key information over the Internet; b) train health workers; c) assure that organizational capacity to respond to bioterrorist events and other urgent health threats exists; and d) provide for rapid dissemination of public health advisories to the news media and the public at large.

Partnerships and Links to DHHS Strategic Plan

These performance measures relate to DHHS Goal 5.1: Improve the capacity of the public health system to identify and respond to the threats to the health of the nation's population. CDC's primary partners in developing national capacity for bioterrorism preparedness and response are state and local health departments. In addition, CDC is working with a variety of federal agencies, academic institutions, and non-governmental organizations such as the Food and Drug Administration (FDA), US Army Medical Research Institute for Infectious Diseases (USAMRIID), Association of Public Health Laboratories (APHL), National Association of County and City Health Officials (NACCHO), Department of Veteran's Affairs (VA), and Johns Hopkins University.

Examples of some of CDC's collaborative activities include the following:

Cooperative agreement with Johns Hopkins University to define protocols for medical management of infection with primary biologic agents of concern for bioterrorism.

Contract with the Department of Veterans Affairs for procurement of pharmaceuticals and medical supplies that comprise the National Pharmaceutical Stockpile.

Cooperative agreement with the Association of Public Health Laboratories for coordination of the National Laboratory Response Network.

Contract with Acambis, Incorporated (formerly called Oravax) for development of a new smallpox vaccine.

PERFORMANCE SUMMARY

As a result of the achievement of the performance measures listed below, local, state, and federal preparedness for biological and chemical terrorism has been strengthened. Highlights of FY 2000 accomplishments include the following:

Deterrence: A total of 36 laboratories from government agencies, universities, research institutions, and commercial entities have been inspected under the Select Agent rule to ensure the safe transfer and use of human pathogens. There are 222 laboratories currently registered with the CDC Office of Health and Safety, and are certified to transfer select agents. It was anticipated that 50 laboratories would be inspected in FY 2000. This was based on a survey performed in 1996 that estimated 300 facilities would be required to register, but that figure now appears to be an overestimate. Based on actual numbers, the target has been modified to reflect actual needs. To help meet current and future goals, three inspectors were recently hired by the CDC Office of Health and Safety and additional laboratories will be inspected during FY 2001. In addition, an inter-agency agreement is being developed to increase the capacity to maintain facility registrations while continuing to perform inspections. CDC's Office of Health and Safety also provides facility design safety consultations to state and local laboratories that are exempted from the Select Agent Rule.

Upgrading State and Local Capacity: Preparedness and Readiness Assessment: Grantees are in the process of completing comprehensive assessments of their capacity for bioterrorism preparedness and response. Analysis of these assessments will allow grantees to better prioritize their resources and effort. These grantees will have completed draft terrorism response plans by the end of FY 2001.

Three exemplar centers for public health preparedness have been established and are implementing model information technology projects which will provide needed assistance for states and localities developing public health information systems.

Surveillance and Epidemiology Capacity: Funding for this component includes awards for building core capacity, as well as special projects. In FY 2000 all 50 states and 4 localities were funded for this component of the cooperative agreement: 50 for core capacity and 8 for special projects. States and localities have used their cooperative agreement funds to enhance their capacity to investigate and mitigate health threats posed by bioterrorism agents. CDC expected to fund 40 health departments for this component in FY 2000. Increased funding for upgrading state and local capacity allowed for funding 14 additional sites.

Laboratory Capacity – Biologic Agents: Many state and local laboratorians have been trained in the handling and testing of critical biologic agents. In addition public health laboratories across the country have been renovated and upgraded to allow for improved diagnosis of potential bioterrorism agents. Currently 43 public health laboratories receive funds to enhance their capacity for identification of biologic agents. All of these laboratories are also members of the National Laboratory Response Network.

Laboratory Capacity – Chemical Agents: In addition to increasing the number of laboratories funded to address this issue from 4 to 5, CDC has worked with grantees to accomplish the purchase, installation, and training associated with new state-of-the-art laboratory equipment required to carry out this highly specialized testing. The five states funded for chemical laboratory response also received training on measurement of nerve agents in human samples and successfully completed a round of proficiency testing to demonstrate their understanding of the method. CDC expected to fund 4 health departments for this component in FY 2000. Increased funding for upgrading state and local capacity allowed for funding 1additional site.

Health Alert Network/Training: In addition to providing support for 4 additional sites for enhanced communications capacity, an annual meeting focused on health alert efforts (such as internet connectivity, broadcast alert, and distance learning) was held in August. A variety of communication and program management tools have been developed including LIST SERVs, E-mail group codes, websites, and an ACCESS database.

Upgrading CDC Capacity: CDC has organized teams of laboratory professionals whose sole responsibility is to provide the necessary laboratory services needed to rapidly and accurately triage and analyze specimens that are suspected to be potential bioterrorism threat agents.

A variety of technical assistance and training efforts have been completed, including: provision of epidemiologic assistance in the investigation of an outbreak of West Nile virus in New York, surveillance support for the World Trade Organization Ministerial Conference in Seattle, and collaboration with the Department of Justice in development of an assessment of public health capacity for bioterrorism.

New testing methods for nerve agents and mustard gases have been developed by CDC. The five states funded for chemical laboratory response received training on measurement of nerve agents in human samples and successfully completed a round of proficiency testing to demonstrate their understanding of the method. States will be trained on the mustard gas method in FY 2001. Forty chemicals were added to the Rapid Toxic Screen in FY 2000 for a total of 90 methods. We did not meet our FY 2000 goal of 100 substances because of the difficulty of obtaining standards for several of the chemical agents. This difficulty is largely due to the dangerous nature of these substances.

National Pharmaceutical Stockpile (NPS) Program: Congress gave CDC the mission to manage and oversee the National Pharmaceutical Stockpile (NPS) in January 1999. CDC was expected by January 1, 2000 to be capable of meeting an expected terrorist threat and met this mandate on time, declaring that it had drugs and medical materiel ready to deploy and an air cargo service ready to deliver it. One of two NPS Program components is the "12-hour Push Package." A 12-hour Push Package can reach a site within 12 hours of a federal order to deploy. There are eight 12-hour Push Packages for security reasons and in case of multiple attacks. In a terrorist event, CDC staff will meet the arriving NPS, transfer custody to state officials, and offer technical assistance on NPS organization, repackaging, and distribution to medication dispensing sites. The second NPS Program component is "vendor-managed inventory" (VMI), or drugs and materiel made and stored for CDC by firms that produce or distribute them. The VA already contracts with such firms and is now concluding negotiations with many to establish NPS Program VMI. VMI is meant to help treat many casualties over time. During FY 2000 the physical stockpile has become fully operational and ready for deployment. Maintaining and upgrading the materials and supplies in the physical stockpile will continue to be a priority activity of the NPS Program (purchase of additional antidotes, antibiotics, vaccines, medical supplies, equipment, etc).

This readiness and maintenance having been achieved on schedule, the NPS Program has expanded to focus on state preparations, as a result of the national TOPOFF-2000 readiness exercise. TOPOFF demonstrated that a critical component of the overall NPS Program is the ability of an impacted area to interact with the NPS Program in the event of a terrorist incident. The ability of states to receive the stockpile now is as much a program priority as ensuring that the stockpile can be delivered quickly. CDC is training state officials who must plan receipt of the NPS and the use of its contents and also offers technical assistance to develop these plans. All NPS Program aspects have a quality control component, which includes surprise visits to sites storing drugs and materiel for the NPS.

2.12.2a Goal-by-Goal Presentation of Performance

Performance Goal: Increase the ability of CDC, state and local health departments to respond to terrorist threats.

Performance Measure	Target	Actual Performance	Ref.
Deterrence			
Public Health laboratories will be inspected in accordance with the Select Agent Rule.	**FY 02:** 70 laboratories. **FY 01:** 65 laboratories. **FY 00:** 50 laboratories.	**FY 02:** **FY 01:** **FY 00:** 36 laboratories. **FY 99:** 14 laboratories.	Page 250
Upgrading State and Local Capacity: Preparedness & Response			
State and local bioterrorism preparedness and response planning activities will be established.	**FY 02:** 11 states or localities. **FY 01:** 11 states or localities. **FY 00:** 11 states or localities. **FY 99:** 5 states or localities.	**FY 02:** **FY 01:** **FY 00:** 11 states or localities. **FY 99:** 11 states or localities. **FY 98:** 0 states or localities.	Page 250
Upgrading State and Local Capacity: Surveillance & Epidemiology Capacity			
Increase the number of state and major city health departments and other sentinel sites with expanded epidemiology and surveillance capacity to investigate and mitigate health threats by bioterrorism.	**Health Departments/ Sentinel Sites:** **FY 02:** 55. **FY 01:** 55. **FY 00:** 40. **FY 99:** 40.	**Health Departments/ Sentinel Sites:** **FY 02:** **FY 01:** **FY 00:** 55. **FY 99:** 34. **FY 98:** 0.	Page 250
Upgrading State and Local Capacity: Laboratory Capacity - Biologic Agents			
The number of laboratories participating in the National Laboratory Response Network to provide rapid and/or reference support.	**FY 02:** 80 laboratories. **FY 01:** 80 laboratories. **FY 00:** 43 laboratories.	**FY 02:** **FY 01:** **FY 00:** 43 laboratories. **FY 99:** 43 laboratories.	Page 250

Performance Measure	Target	Actual Performance	Ref.
Increase the capacity of state and major city laboratories to provide or access rapid testing or potential bioterrorism agents.	**FY 02:** 55 laboratories. **FY 01:** 50-55 laboratories. **FY 00:** 40 laboratories. **FY 99:** 2 laboratories.	**FY 02:** **FY 01:** **FY 00:** 43 laboratories. **FY 99:** 43 laboratories. **FY 98:** 0 laboratories.	Page 250
Upgrading State and Local Capacity: Laboratory Capacity - Chemical Agents			
The number of laboratories qualified to provide surge capacity for analysis of chemical agents.	**FY 02:** 5 laboratories. **FY 01:** 5 laboratories. **FY 00:** 4 laboratories.	**FY 02:** **FY 01:** **FY 00:** 5 laboratories. **FY 99:** 4 laboratories.	Page 250
Upgrading CDC Capacity: Laboratory Capacity - Chemical Agents			
Rapidly measure in blood and urine toxic substances likely to be used in chemical terrorism.	**FY 02:** 150 substances. **FY 01:** 120 substances. **FY 00:** 100 substances. **FY 99:** 50 substances.	**FY 02:** **FY 01:** **FY 00:** 90 substances. **FY 99:** 50 substances. **FY 98:** 0 substances.	Page 250
Upgrading State and Local Capacity: Health Alert Network/Training			
The number of states and major metropolitan areas with health sector dedicated communications systems to facilitate or expedite detection and response to terrorist events will be increased.	**States/Metropolitan Areas:** **FY 02:** 54. **FY 01:** 54. **FY 00:** 40.	**States/Metropolitan Areas:** **FY 02:** **FY00:** 40. **FY 99:** 36. **FY 98:** 0.	Page 250
The number of communities demonstrating advanced applications of information technology and training for preparedness and response to chemical and biological terrorism.	**FY 02:** 3 communities. **FY 01:** 3 communities. **FY 00:** 3 communities.	**FY 02:** **FY 01**: **FY 00:** 3 communities. **FY 99**: 3 communities.	Page 250

Performance Measure	Target	Actual Performance	Ref.
	National Pharmaceutical Stockpile		
Maintain a national pharmaceutical "stockpile" for deployment to respond to terrorist use of biological or chemical agents against the U.S. civilian population.	**FY 02:** Maintain a national pharmaceutical stockpile for deployment to respond to terrorist use of biological or chemical agents, including the ability to medically treat civilians from biological and chemical agents as delineated in the HHS Bioterrorism Strategic Plan for FY02. **FY 01:** Maintain a national pharmaceutical stockpile for deployment to respond to terrorist use of biological or chemical agents, including the ability to medically treat civilians from biological and chemical agents as delineated in the HHS Bioterrorism Strategic Plan for FY01. **FY 00:** Maintain a national pharmaceutical stockpile for deployment to respond to terrorist use of biological or chemical agents, including the ability to medically treat civilians from biological and chemical agents as delineated in the HHS Bioterrorism Strategic Plan for FY00. **FY 99:** Create a national pharmaceutical "stockpile" available for deployment to respond to terrorist use of potential biological or chemical agents, including the ability to protect 1-4 million civilians from anthrax attacks.	**FY 02:** **FY 01:** **FY 00:**The stockpile continued to develop throughout the year. A 12-hour Push Package became the initial response; Vendor Managed Inventory became the follow-on response. Together, these two stockpile response components built the capacity to fully treat or give full prophylaxis to citizens to an extent beyond the FY00 targets listed in the HHS Bioterrorism Strategic Plan. **FY 99:** Created a national pharmaceutical "stockpile" available for deployment to respond to terrorist use of potential biological or chemical agents, including the ability to protect 1-4 million civilians from anthrax attacks.	Page 250

Performance Measure	Target	Actual Performance	Ref.
	Upgrading CDC Capacity - Worker Safety		
Develop guidelines and certification process for respirators.	**FY 01:** 1 set of guidelines.	**FY 01:**	Page 250
Total Program Funding (Dollars in thousands)	**FY 2002**: $181,919 (Estimate) **FY 2001:** $180,919 (Final Appropriation) **FY 2000:** $152,720 (Actual) **FY 1999:** 10/2001 (Actual)		

Verification/Validation of Performance Measures: Performance for the target related to measuring toxic substances will be validated through the Clinical Laboratory Improvement Act of 1988 (CLIA), please see appendix A.2 for further details. Successful accomplishment of these objectives will, in part, be verified using data submitted from funded states. Performance will be verified through on-site technical assistance and periodic visits and progress reviews.

2.16 Program Support Goals

2.16.1 Program Description, Context and Performance Summary

Several management activities at CDC are important to assure the integrity of CDC processes and resources. For the purpose of accountability, CDC has included the following program support activities that are considered important to monitor. Additional major, short-term management activities that are monitored and reported through other mechanisms, such as Y2K activities, are not included in this section.

Information Access, Security Integrity, and Continuity: CDC is an information-intensive organization. Much of CDC's mission revolves around the collection, analysis, and dissemination of data on health events, vital statistics and other health determinants. Providing access to authorized data and information assets is vital to personal and public health decision making, research, policy development, and program management. Protecting the confidentiality, privacy, and integrity of sensitive data and information is of utmost importance to CDC, our data provider partners, and the individuals and organizations who entrust public health agencies with these data. Ensuring that critical systems operate reliably and continuously is also vital as programs and business processes are ever more dependent on information technology and systems.

Financial Management Processes, Internal Controls, and Information Systems: The Chief Financial Officers' Act requires federal agencies to have audits of their financial statements. This audit consists of a review of the agency's financial statements and of the underlying assessment and accounting principles used. In order to receive an "unqualified" auditor's opinion, the agency's financial statements must be determined to be presented fairly in accordance with the hierarchy of accounting principles and standards approved by the Federal Accounting Standards Advisory Board.

Recruitment and Retention of Qualified and Diverse Workforce: The CDC workforce is a critical strength of the agency. The recruitment and retention of highly qualified staff who represents the public that we serve is a top priority of the agency.

Performance Summary:

Information Access: The CDC Voice/FAX Information Service (VIS) continues to be an important dissemination method for public and practitioner information. However, usage is down from the previous year. There were several factors that contributed to not achieving the projected growth goals. The Fax System has also decreased in number of calls, number of documents and number of pages. While the numbers are lower than the previous year, the numbers were still significant – average monthly calls received were over 46,000 and over 14,000 requests for documents to be faxed.

The reduction in the VIS usage can be directly attributed to continued growth of Internet access by the public. Those callers that have access to fax are probably the same audience that have access to the Internet. In reviewing the statistics for the Internet, visitors for FY 2000 increased over 88% over that for FY 1999; accesses to information for FY 2000 increased by 82% over FY 1999 as well. Since long-term projections indicate a reduced use of both audio and written information in favor of the Internet, CDC proposes the merging of the performance measure of continually enhancing CDC's Internet infrastructure with that of continuing the enhancement of VIS. The new performance measure will be:

> Continually enhance CDC's Information Technology infrastructure so that the public access to CDC information resources using both the Internet infrastructure and the CDC Voice/FAX Information Service (VIS) grows 25% per year.

The public benefits by being able to access information from CDC in the most convenient manner for them.

Information Security and Integrity: FY 2000 Information Security goals were met with no serious losses, alterations or releases of critical data. Dual fire walls, intrusion detection technology and incident response processes remain in place. Additional improvements to network infrastructure have also taken place to address increase in destructive computer viruses. These measures include enhanced awareness, refined incident response, common detection/removal technologies and enhancing our IT infrastructure with anti virus technologies.

Financial Management Processes, Internal Controls, and Information Systems: CDC's first financial statement audit was performed in FY 1997, and CDC received a qualified opinion. Since FY 1997, CDC has received 3 consecutive unqualified opinions for the fiscal years 1998, 1999 and 2000. While CDC is pleased with the success of the financial audits, CDC is also devoting significant resources to upgrading the accounting system, improving management controls over budget execution and increasing the training opportunities for financial staff members.

Recruitment and Retention of Qualified and Diverse Workforce: The overall goal of reducing the time to refer candidates by 25% was met - 80 days baseline reduced to 59.3 days (a 25.9% reduction) That portion of the overall time which was job classification was reduced from 15 days to 13.9 days.

2.16.2 Goal-by-Goal Presentation

Performance Goal: Provide a variety of standardized and integrated means for health practitioner and public access to CDC information resources.

Performance Measure	Target	Actual Performance
Continually enhance CDC's Internet infrastructure and valued information content so that access to CDC information resources grows 25% per year.	**FY 01:** See new goal listed below. **FY 00:** 25% increase. **FY 99**: 25% increase.	**FY 01:** **FY 00:** Average Monthly visitors to CDC's website was over 2.8M with an average of 7 accesses of information content per visit. **FY 99:** Average monthly visitors to CDC's website was 1.9M with an average of 5 accesses of information content per visit. **FY 98:** Baseline: Average monthly visitors to CDC's website was 0.7M with an average of 5.6 accesses of information content per visit.
Continue enhancing the CDC Voice/FAX Information Service (VIS) such that usage grows 10% per year.	**FY 01:** See new goal listed below. **FY 00:** 10% increase. **FY 99**: 10% increase.	**FY 00:** Average monthly calls to the CDC VIS was over 46,000 with over 14,000 requests for documents to be faxed to the callers. The lowered usage can be attributed to the tremendous increase in Internet usage. **FY 99:** Average monthly calls to the CDC VIS was 51,000 with 21,000 requests for documents to be faxed to the callers. **FY 97:** Baseline: Average monthly calls to the CDC VIS was 45,000 with 25,000 requests for information documents to be faxed to the callers.

Performance Measure	Target	Actual Performance
Continually enhance CDC's Information Technology infrastructure so that the public access to CDC information resources using both the Internet infrastructure and the CDC Voice/FAX Information Service grows 25% per year.	**FY 02:** 25% increase overall. **FY 01:** 25% increase overall.	**FY 02:** **FY 01:** **FY 00:** Baseline: Average monthly visitors to CDC's website was 2.8 M with an average of 7 accesses of information content per visit. Average monthly calls to the CDC VIS was 46,000 and 14,000 requests for documents to be faxed to the callers.

Performance Goal: Enhance CDC's information security program.

Performance Measure	Target	Actual Performance
No serious losses, alterations, or releases of data or information occur in CDC's security program that are critical, highly sensitive, or are covered by privacy or confidentiality requirements.	**FY 02:** **FY 01:** No serious losses, alterations, or releases of data or information occur that are critical, highly sensitive, or are covered by privacy or confidentiality requirements. **FY 00:** No serious losses, alterations, or releases of data or information occur that are critical, highly sensitive, or are covered by privacy or confidentiality requirements.	**FY 02:** **FY 01:** **FY 00:** There have been no serious losses, alterations or releases of critical data. Additional improvements to network infrastructure have also taken place to address increase in destructive computer viruses. **FY 99:** There have been no losses, alterations, or releases of data or information. Have implemented added security measures, including network and host-based intrusion detection systems. **FY 98**: There have been no losses, alterations, or releases of data or information. However, with the higher degree of organization's vulnerability with Internet connectivity, additional security measures are required to increase prevention effectiveness.

Verification/Validation of Performance Measures: Dual fire walls provide access control, logging and restriction to CDC networks from the Internet. Additional security measures will increase the protection of data or information through Internet access. Intrusion software captures data necessary for monitoring and assessing intrusion activity, and auditing software audits the web servers and network devices to insure compliance with established security policies and procedures. Public key infrastructure (PKI) ensures robust authentication for access to systems and

information through digital certificates and protection of sensitive data through encryption.

Performance Goal: Information systems operate reliably and continuously.

Performance Measure	Target	Actual Performance
Ensure critical information systems and IT infrastructure (CDC Data Center, wide area network, e-mail, and Internet/web services) operate reliably and continuously.	**FY 02:** 99.5% continuous operation. **FY 01:** 99% continuous operation.	**FY 02:** **FY 01:** **FY 00:** Performance measurement system under development, reliability was approximately 97.3%.

Performance Goal: Ensure that CDC's financial statements are properly prepared and presented.

Performance Measure	Targets	Actual Performance
100% audited financial statements with no qualifications.	**FY 02:** 100% with no qualifications. **FY 01:** 100% with no qualifications. **FY 00:** 100% with no qualifications.	**FY 02:** **FY 01:** **FY 00:** 100% with no qualifications. **FY 99:** 100% with no qualifications. **FY 98:** Qualified: Two items prevented CDC from receiving an unqualified opinion: validation of the beginning balances, and the grant accrual process.

Verification/Validation of Performance Measures: Audited financial statements are published annually in the Chief Financial Officers Report for CDC and ATSDR. The measure and goal will be validated and verified by the published report of the independent audit firm, Ernst & Young.

Performance Goal: Decrease the time it takes to refer candidates for vacancies and the time entailed in classifying positions.

Performance Measure	Targets	Actual Performance
The time it takes to classify positions and the time involved in referring candidates to fill positions.	**FY 02:** Maintain reduced time to refer candidates (not more than 60 days). **FY 01:** Maintain reduced time to refer candidates (not more than 60 days). **FY 00:** 25% time reduction	**FY 02:** **FY 01:** **FY 00:** Achieved: Time to classify jobs -13.9 days; Time to refer candidates -59.3 days. **FY 98:** Time to classify jobs - 15 days; Time to refer candidates - 80 days.

Verification/Validation of Performance Measures: Data will be collected through the Staffing Tracking and Reporting System (STARS) in the Human Resources Management Office, CDC. This system is monitored monthly for system errors and data irregularities.

Appendix A.1

Approach to Performance Measurement

CDC and its partners are concerned with a wide spectrum of health issues including infectious diseases, chronic conditions, reproductive outcomes, environmental health, occupationally related health events, and injuries. This array of issues requires a variety of intervention strategies for populations, in addition to the need to provide clinical preventive services for individuals. To implement effective interventions, CDC engages in extensive dialogue with its partners, communities, and the public to identify and implement intervention strategies specific to the needs of diverse populations. Some examples include the provision of prophylactic measures (e.g., vaccination, post-exposure rabies prophylaxis), educational services (e.g., public health messages to diverse populations, counseling, and prophylaxis for contacts of persons with certain infectious diseases), inspection of food establishments, and control of outbreaks. For these activities, the rational development of public health policy depends on public health information.

In order to effectively respond to this variety of health problems and intervention methods, different types of information for action and a broad array of data collection methods are necessary. For example, information on the age of children with vaccine-preventable diseases has been used to establish policy on appropriate ages for having vaccinations. Information on the prevalence of elevated lead in blood has been used as the justification for eliminating lead from gasoline and for documenting the effects of this intervention, and information on the rate at which breast cancer is detected has led to new policies regarding the recommended ages at which to have mammograms.

As outlined in this section, CDC has a wide range of health data systems that provide the science base for identifying health problems, designing interventions, and monitoring program performance. These data systems face considerable challenges in addressing each of these three areas. For the most part, data systems that were designed to support scientific objectives are now becoming important for the monitoring of performance. Several specific challenges in providing data to monitor performance under GPRA are outlined below:

As GPRA measures are refined over time, data systems will need to produce data on a more timely basis, and with a frequency relevant to the periods over which performance is being measured.

As the health system itself changes, it can no longer be assured that historical data series will continue to produce needed data. For example, the move toward managed care may make medical information increasingly proprietary, making access for research and statistical purposes more difficult. Similarly, changes in relationships between different health care providers, as well as laboratories, may make public health surveillance based on case reports more difficult. At the same time, these changes present opportunities for new partnerships to obtain needed information.

Data systems will need to produce information in sufficient quality and precision to detect what may be relatively small changes in key performance indicators. This may require investments in larger sample sizes for surveys, new technology for improving data quality, etc. Continuing research will be required to establish the data systems, as well as the underlying evaluation approaches, for assessing cause (program intervention) and effect (outcomes) for performance monitoring.

Many of our current major national data systems are the source of GPRA measures for CDC and for other health programs. It is important to assure that these data systems are assessed and upgraded to remain current with the needs of our public health infrastructure. Resources to assure that these data systems are maintained and strengthened are included in the FY 2002 CDC budget request and need to be continued.

Many CDC and HHS programs are implemented at the state and local level, and it will be increasingly important to obtain reliable, systematic data at these levels to monitor program implementation, performance, and outcomes.

Information Categories

Ascertaining what information is needed and how to collect it is a complex issue. Information for action must be useful to public health programs at local, state, and national levels. At least seven categories of information are used

by CDC and its partners to understand and address disease, injury, and disability using the public health model. These categories of information include: a) reports of health events affecting individuals; b) vital statistics on the entire population; c) information on the health status, risk behaviors, and experiences of populations; d) information on potential exposure to environmental agents; e) information on existing public health programs; f) information useful to public health but obtained by organizations not directly involved in public health practice; and g) information on the health care system and the impact of the health care system on health.

Reports of Health Events. Reports of cases of specific diseases of public health importance serve as the basis of many of CDC programs. The National Notifiable Disease Surveillance System (NNDSS) seeks reports on all cases of more than 40 conditions in the United States. To minimize the burden placed on those who report the information, CDC limits the amount of information collected for each case. NNDSS data are used to monitor trends in disease, to evaluate public health programs, and to identify unusual occurrences of conditions that may require further epidemiologic investigation at the local level. For some public health purposes, effective action requires additional detail on each case.
For this reason, supplemental data collection systems have been developed for some of the diseases involved in the NNDSS. Such supplemental systems may be less comprehensive in terms of the population represented but provide more detailed information on characteristics of the occurrence of disease. For example, cases of hepatitis are reported weekly to NNDSS for publication in the *Morbidity and Mortality Weekly Report (MMWR)*. In addition, the Viral Hepatitis Surveillance Project collects data on specific risk factors for different types of viral hepatitis in selected geographic areas. These data have been used to document the importance of behavior associated with sexual activity and drug use as a risk factor for transmitting Hepatitis B and to target education and vaccination programs.

State public health laboratories currently analyze 41 million specimens annually. Some of the data from the analyses immediately enter the electronic Public Health Laboratory Information System (PHLIS) and are used in monitoring both short and long range trends in the incidence of disease.

Intervention and control of some conditions require more detailed information than can be obtained feasiblely from a large group of clinicians or institutions. As a result, networks of selected health care providers have been organized to meet these targeted information needs. For example, CDC's Sentinel Event Notification System for Occupational Risks (SENSOR) targets select groups of health care providers as a component of a comprehensive approach that uses multiple data sources to provide information used on directing efforts to prevent workplace-related morbidity. The National Nosocomial Infections Surveillance System (NNIS) receives reports from a selected group of hospitals on the incidence and characteristics of hospital-acquired infections; data from this system have been instrumental in alerting health authorities to the emergence of antibiotic-resistant strains of bacteria, which in turn has led to the development of specific recommendations regarding the use of antibiotics.

Vital Statistics. Vital records (e.g., births, deaths) are the primary source of some of the most fundamental public health information. Data on teen births, access to prenatal care, maternal risk factors, infant mortality, causes of death, and life expectancy are examples of the staples of public health provided by vital statistics. Vital statistics are often the most complete and continuous information available to public health officials at the national, state, and local levels; the timely availability of these data is critically important.

In the United States, the legal authority for vital registration rests with the States and territories. Therefore, CDC's National Center for Health Statistics (NCHS) produces national vital statistics by collecting data from the vital records of the states. NCHS works with the states to ensure a uniform national data base through the promotion of standard data collection forms, data preparation and processing procedures, and also provides partial financial support for the state systems.

Information on Health Status, Risk Factors, and Experiences of Populations. Since the determinants of many important health problems are behavioral, environmental, genetic or from other causes, health agencies need information that is not readily available from medical records on the prevalence of various types of behavior and on access to care. Thus, regularly conducted surveys of the general population are needed for public health. These surveys may range from large-scale assessments of the general population to assessments targeted at high-risk (i.e., particularly vulnerable populations). This need is particularly acute at the state and local level. Surveys provide information on

Baseline health status (e.g., the National Health and Nutrition Examination Survey, NHANES, and the National Health Interview Survey, NHIS)
Morbidity (e.g., the National Ambulatory Medical Care Survey, NAMCS)
Prevalence of specific behavioral risk factors (e.g., the Behavioral Risk Factor Surveillance System, BRFSS, and the Youth Risk Behavioral and Surveillance System, YRBSS) and medical risk factors (e.g., NHANES and Pregnancy Risk Assessment and Monitoring System, PRAMS)
Use of health care services and identification of underserved populations (e.g., NHIS)
Potential for exposure to toxic agents (e.g., the National Occupational Exposure Survey, NOES).

This information is used in developing prevention and control programs and in ensuring adequate delivery of health services.

Information on Potential Exposure to Environmental Agents. Information on exposures to environmental agents can be used in evaluating the risk to health represented by non-infectious diseases, injuries, and certain infectious diseases. For example, measurement of airborne particulates is useful in assessing risks related to certain pulmonary disorders (e.g., asthma and lung cancer). Information on vectors that may carry agents of infectious disease (e.g., ticks as vectors for Lyme disease, and Rocky Mountain spotted fever, mosquitoes as vectors for viral encephalitides, and raccoon as vectors for rabies) is important in evaluating the risk for having such infections.

Information on Programs. Data necessary to operate public health programs include such items as number of clients served and cost of services rendered. These data are useful to public health officials in assessing the effectiveness of public health programs, comparing different programs, documenting the need for continuing a particular program, and maintaining accountability for tax dollars spent.

Information from Other Organizations. Data useful for public health are currently or potentially available from organizations whose functions may not be related to those of CDC and of state and local health departments. Data from the Bureau of the Census, for example, are necessary both for the reliable computation or rates and for the proper adjustment of rates for comparison over time or in different geographic areas. The Environmental Protection Agency (EPA) compiles environmental air-monitoring data to assess compliance with standards for air pollutants established by the Clean Air Act. Data collected through this system are also used by public health officials for hazard alerts when pollutants exceed Federal standards and in studies of the effects of air pollutants on morbidity associated with respiratory diseases. The Occupational Safety and Health Administration (OSHA) and the Bureau of Labor Statistics compile data on the occurrence of work-related injuries and illnesses and exposure to hazards in the workplace, which can be used for surveillance and research purposes. The Department of Transportation operate the Fatal Accident Reporting System, used in public health to assess risk factors for motor-vehicle-related injuries and deaths. The Federal Bureau of Investigation (FBI) crime statistics assist in evaluating the public health impact of intentional injuries, and the Consumer Product Safety Commission collects data on injuries related to consumer products.

Information on the Heath Care System. Information is also needed on the health care system and the impact that changes in the system have on health. CDC provides a great deal of information to monitor the capacity of the personal health care system utilization of that system and access to health insurance and services by the American people. These data include: inventories of health care providers; surveys to determine patterns of utilization of health services such as hospitalization rate and uptake of new technologies tracking health insurance coverage on the part of the population and health insurance benefits provided by employers; and access to health care and barriers (both financial and non-financial) to access.

Appendix A.2

Data Verification and Validation Of Select Data Systems

Data verification and validation help to assure that the data CDC is using to assess performance is of sufficient quality. The following data systems have been referenced in the CDC Performance Plan as sources for data used in assessing program implementation and effectiveness.

Behavioral Risk Factor Surveillance System:

In 1984, the Behavioral Risk Factor Surveillance System (BRFSS) was established by CDC, with 15 states participating in monthly data collection. Although designed to collect state-level data, a number of states from the outset stratified their samples to allow them to estimate prevalence for regions within their respective states. By 1994, all 50 states and the District of Columbia were participating; as of 1998, Puerto Rico also was collecting monthly data and the Virgin Islands and Guam were conducting point-in-time surveys.

A standard questionnaire was developed at CDC for states to use to provide data that could be compared across states. The initial survey primarily included existing questions from national surveys such as the National Health Interview Survey. The basic questionnaire was designed to allow the opportunity to add their own questions. The BRFSS gathers information on health behaviors related to the leading preventable causes of death, including physical inactivity, injury, weight control, alcohol consumption, tobacco use, and HIV-AIDS. It also collects data on preventive health practices such as mammography use.

One important characteristic of the BRFSS is its flexibility. It permits states to add questions of their own design, but is uniform enough to allow state-to-state comparisons for certain questions. Participating states use these data for many purposes. Among these are to identify demographic variations in health-related behaviors, target services, address emergent and critical health issues, propose legislation for health initiatives, and to measure progress towards state and national health objectives. The system's broad network for information gathering also enables states to evaluate their disease prevention and health promotion efforts.

The questionnaire has three parts: 1) the core component, consisting of the fixed, rotating, and emerging core; 2) optional modules; and 3) state-added questions.
Core component. The *fixed core* is a standard set of questions asked by all states. It includes queries about current behaviors that affect health (e.g., tobacco use, alcohol consumption) and questions on demographic characteristics. The *rotating core* is comprised of two distinct sets of questions, each asked in alternating years by all states, that address different topics. The *emerging core* is a set of up to five questions that are added to the fixed and rotating cores. Emerging core questions typically focus on issues of a "late breaking" nature and do not necessarily receive the same scrutiny that other questions receive prior to being added to the instrument. These questions are part of the core for one year and are evaluated during or soon after the year concludes to determine their potential value in future surveys.
Optional CDC modules. These are sets of questions on specific topics (e.g., smokeless tobacco, arthritis) that states elect to use on their questionnaires.
State-added questions. These are questions developed or acquired by participating states and added to their questionnaires.

Each year, states and CDC agree on the content of the core components and optional modules. For comparability, many of the questions are taken from established national surveys. This allows the BRFSS to take advantage of questions that may have been tested and allows states to compare their data with those from other surveys.

There have been more than 30 validity and reliability studies of the BRFSS, and they demonstrate that BRFSS collects high quality and valid data.

CDC Integrated Resources Information System:

Integrated Resources Information System (IRIS) is a management tool for use in budgeting and reporting. It is a highly sophisticated executive information system. It serves as both a project and financial management system for CDC and enables managers at all levels to define goals, objectives, and outcomes. It provides an automated budget management system that will enable FMO and CIOs to formulate and execute their budgets while linking resources to outcomes as required by GPRA. IRIS provides CDC with a mechanism to access information to produce reports or other ad hoc inquiries.

Clinical Laboratory Improvements Act of 1988 (CLIA):

The Clinical Laboratory Improvements Act of 1988 (CLIA) is designed to ensure that the development and revision of laboratory methods for various substances is conducted in a sound scientific manner. To accomplish this goal CLIA establishes a series of specific standards that must be achieved prior to the certification of a laboratory method for an individual substance. These standards include a strenuous series of internal and external evaluations of the laboratory method being developed.

Among the internal evaluations and controls that CLIA requires is the development of a detailed analytical procedures manual for each method that is developed. These manuals must be verified and approved by senior personnel in the laboratory who were not directly involved in the development of the method. CLIA also provides detailed specifications that must be maintained regarding quality control and calibration of laboratory equipment. Further internal control is provided through regular review from a designated Quality Assurance Officer. This officer is tasked with ensuring that the generally accepted international scientific standards are being followed in the development of the method for each substance.

External evaluation and control is provided through regular on-site inspections by statutorily approved independent CLIA inspection teams. These inspections are designed to review the internal procedures that the organization has established to ensure that CLIA standards are met. These inspections also review the individual components of numerous methods to further verify that all developed and refined methods have undergone the appropriate review. To date CDC has successfully passed all on-site CLIA inspections.

Group B Streptococcal Disease Surveillance, part of the Active Bacterial Core Surveillance (ABCs)

In 1989, active surveillance for group B streptococcal disease was initiated as part of an active surveillance system for several pathogens which cause invasive disease. Surveillance was conducted in five geographic areas which were awarded contracts following a competitive request for proposals. In 1994, active surveillance for group B streptococcal disease was included as a core activity of the newly established Emerging Infections Program (EIP) Network, a cooperative agreement program that addresses important public health issues related to infectious diseases. In 1999, the EIP network comprised 8 states; all participated in ABCs and conducted active surveillance for invasive group B streptococcal disease.

ABCs involves population-based active surveillance for laboratory-confirmed cases of invasive bacterial disease caused by group B streptococcus, group A streptococcus, *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Neisseria meningitidis*. The purpose of ABCs data collection is to monitor the incidence of invasive disease due to group B streptococcus and the other pathogens in a large, diverse population and to characterize epidemiologic and clinical features of disease occurrence. The focus of the data collection system is disease occurrence data, with limited clinical details (e.g., anatomic site of infection; whether hospitalized, outcome of infection) and basic demographic information (e.g., age, sex, race, ethnicity). GBS isolates from certain periods or areas are tested for serotyping and antimicrobial susceptibility. The population under surveillance for group B streptococcus in 1999 totaled 22.4 million, with approximately 318,000 live births per year. Surveillance officers in each state actively contact personnel in all microbiology laboratories which process bacterial cultures from sterile sites (e.g., blood) to find cases of group B streptococcus. Laboratory audits are also conducted semi-annually to detect possible under

reporting. Standardized case report forms with basic demographic and clinical information are completed entered into EPI-INFO based software at each state. Data are transmitted electronically from the EIPs to CDC's ABCs team on a monthly basis. Annual surveillance reports on invasive GBS disease as well as the other pathogens are made available on the Internet at the ABCs website --http://www.cdc.gov/ncidod/dbmd/abcs. Laboratory testing of isolates collected as part of surveillance is performed in reference laboratories (e.g., at the CDC or some of the state health departments). Electronic files containing results of laboratory testing of each state's isolates are fed back to that state on a monthly basis.

ABCs has documented substantial changes in the epidemiology of invasive group B streptococcal disease during the 1990s, a period of time in which increased use of preventive policies occurred at hospitals and obstetric practices.

Quality assurance and quality control:
The case definition for surveillance is isolation of the bacteria from a normally sterile site. GBS cases counted in the surveillance system are therefore laboratory-confirmed; however changes in diagnostic practices could potentially reduce detection of laboratory-confirmed GBS disease and in the future might impact the validity of this case-finding method. While reduced use of blood culturing may be a real problem for detection of disease in older age groups, the severity of neonatal GBS disease and the very high proportion of cases with onset prior to discharge from a hospital suggests that blood cultures continue to be used regularly by practitioners managing clinical illness likely to be caused by GBS. The laboratory audits conducted routinely as part of ABCs assure that the data are complete for the surveillance populations, and represent a tremendous strength of this system. Data review (for completeness and errors) is conducted monthly by CDC staff and potential errors transmitted to state personnel for evaluation. Performance standards for active surveillance have been established in each site, in order to permit aggregation of data collected via somewhat different approaches by specific states (e.g., information collection by infection control personnel vs. county health department personnel). Detailed instruction forms for completion of the case report form information have been developed to assure consistency across sites. Stakeholders--i.e., state-based surveillance officers and the CDC ABCs team-- hold monthly conference calls to address logistical and technical aspects of the system, and hold an annual meeting during which protocols are reviewed and updated, special studies presented, and innovations to the system discussed. Site visits by epidemiologists and data managers from CDC's ABCs team to many of the EIP states have occurred during the past few years on an as-needed basis, and annual site visits are planned for the future.

Because the system represents population-based information, the timeliness of final reports each year are dependent on availability of information on the denominators -- i.e., census data or projections for race and age-specific populations at county levels. For perinatal conditions such as group B streptococcal neonatal disease, live birth data and natality data are used for denominators. Natality data from NCHS is available even later in the calendar year than census estimates.

Easy access to the data are provided through a website for ABCs developed during 1999, which includes the ABCs basic protocol and one page surveillance reports for each of the pathogens for each year. Additional information on GBS is also available on a website focused on that infection, with many materials targeted to pregnant women or health care providers and public health workers concerned with pregnant women (http://www.cdc.gov/ncidod/dbmd/gbs).

Limitations of the Data:
The principal limitation of group B streptococcal disease surveillance through the ABCs is that it is not conducted throughout the United States. Substantial geographic variation in incidence of invasive GBS disease has been noted, and it is unclear whether states outside of ABCs areas have experienced similar changes in the incidence of GBS disease as that evident within surveillance areas. Racial differences in disease incidence have been marked in the past, with African Americans experiencing substantially higher rates of invasive GBS disease in all age groups compared with whites. However, from 1993 to 1998, the black-white gap in incidence of early-onset GBS disease (i.e., infection in infants <7 days of age) narrowed by 75%, during a time when incidence overall declined by 65%. The excess rates in blacks have remained constant in older age groups. One way of addressing the lack of information about incidence of invasive GBS disease in areas that are not part of ABCs is to make the methods and tools of ABCs available more broadly. Through our website and frequent publications (e.g., MMWR) we are attempting to provide other state health departments with information that can help them assess whether the efforts involved in conducting invasive GBS disease surveillance, particularly for early-onset disease in infants < 7 days of

age, are feasible in their locales.

References:

Schrag SJ, Zywicki S, Farley MM, Reingold A, Harrison L, Lefkowitz L, Hadler J, Danila R, Cieslak P, Schuchat A. Group B Streptococcal disease in the era of intrapartum antibiotic prophylaxis: Population-based surveillance in the United States, 1993-1998 (in press, New Engl J Med)

Schuchat A, Polder J. Child Health: Bacterial and other infectious diseases. *In*: From Data to action: CDC's Public Health Surveillance for Women, Infants and Children, editors: L.S. Wilcox and J.S. Marks, U.S. Dept. of Health and Human Services, Public Health Service, 1995:271-280.

Zangwill KM, Schuchat A, Wenger JD. Group B streptococcal disease in the United States, 1990: Report from a multistate active surveillance system. In: CDC *Surveillance Summaries*, November 20, 1992. MMWR 1992; 41(no. SS-6):25-32.

National Health and Nutrition Examination Survey:

The National Health and Nutrition Examination Survey (NHANES) is a program of studies designed to assess the health and nutritional status of adults and children in the United States. Began in the early 1960's, NHANES established baseline data for blood cholesterol, blood pressure, cognition in children, height, weight, and other factors. The first national prevalence rates of cardiovascular disease, arthritis, and diabetes were estimated using these figures.
The NHANES is an ongoing program that allows crude annual estimates for the prevalence of topic areas included in the survey. For estimates of smaller population sub-groups, by various demographic characteristics, and for prevalent conditions and diseases, data must be accumulated over several years to provide adequate estimates. The survey screens 15,000 households per year and selects 3,500. From this sample, 5,000 people are interviewed and examined annually. Sample persons are recruited from 15 Primary Sampling Units (PSU's, counties or clusters of counties) each year, and the sample is chosen to assure sufficient sample sizes to provide reliable estimates by gender and age group for non-Hispanic whites, Mexican Americans, and African Americans.

NHANES data are collected by a health interview, a physical examination, and collection of biologic specimens, primarily blood and urine. The forty-five minute health interviews are conducted in respondents' homes. The physical examinations, which last from three to four hours, are performed in specially-designed and equipped mobile examination centers (MEC's) that travel to survey locations throughout the country. The examination survey team consists of a physician, dentist, medical and health technicians, and dietary and health interviewers, while a large staff of trained bilingual interviewers conducts the household interviews.

Data are collected on the prevalence of chronic conditions in the population. Estimates for previously undiagnosed conditions, as well as those known to and reported by survey respondents may be produced. Data are also collected on a range of risk factors, including health-related behaviors, socioeconomic status, and environmental exposures.

An advanced computer system using high-end servers, desktop PCs, and wide-area networking collects and processes all the NHANES data, nearly eliminating the need for paper forms and manual coding operations. Household interviewers use notebook computers with electronic pens to conduct interviews in the field. Data collected in the MEC's are automatically transmitted data via a frame relay network into central databases. Survey information is available to the NCHS within 24 hours of collection.

Information from NHANES is made available through an extensive series of publications and articles in scientific and technical journals. Survey data are also available on CD-ROM and computer diskettes. In previous years, data were available for analysis approximately 31 months after collection. A major goal of the agency is to improve the expediency with which data are available. The new information system has already substantially improved access to the data from the field.

Quality Assurance/Quality Control

A comprehensive quality assurance program is instituted before data collection begins with appropriate training that requires significant practice time for the health examiners and interviewers. The training focuses on hands-on experience rather than on didactic methods. During data collection, meetings are held regularly between the health examiners and survey staff to discuss ideas related to the execution of the components, updates, or unusual situations encountered. Staff are retrained as necessary.

NHANES relies on both passive and active monitoring systems for operational and content related quality control. Passive quality control relies on automated computer procedures for detecting data anomalies. After careful analysis, appropriate activities can be undertaken to resolve any data collection issues. Active quality control will rely on examiner feedback to help identify, evaluate, and select remedies to problems and fine tune procedures. It also includes gold standard examinations and field observation and reporting by content matter experts from the CDC, the contractor and collaborators.

NHANES primarily relies on physical measurements which are well established biomedical procedures. In most instances these measurements represent the gold standard data against which self reported data might be validated for other subjective data collection modalities. When a new technology is considered for NHANES, it is evaluated to determine if it provides a valid estimate of the condition, risk factor or measurement for which it is being used. This may include a review of the scientific literature, conduct of an expert workshop or the undertaking of a validity study.

National Health Interview Survey:

The National Health Interview Survey (NHIS) is the principal source of information on the health of the civilian non-institutionalized population of the United States. Data have been collected continuously since 1957. Since that time, the survey has been updated with the newest version of the survey implemented in the field in 1997. The main purpose of the NHIS is to monitor the health of the United States population through the collection and analysis of data on a broad range of health topics. A major strength of the survey is the ability to display these health characteristics by many demographic and socioeconomic factors.

The NHIS data are used widely throughout the Department of Health and Human Services to monitor trends in illness and disability and to track progress toward achieving national health objectives. The data are also used by the public health research community for epidemiologic and policy analysis of such timely issues as characterizing those with various health problems, determining barriers to accessing and using health care, and evaluating Federal health programs.

The NHIS is a cross-sectional household interview survey. Sampling and interviewing are continuous throughout each year. Households chosen for interviewing are a probability sample representative of the target population. NHIS data are collected annually from approximately 43,000 households including about 106,000 persons. Survey participation is voluntary and the confidentiality of responses is assured. The annual response rate of NHIS is greater than 90 percent of the eligible households in the sample.

The NHIS has three modules, 1) a Basic module, 2) a Periodic module, and 3) a Topical module:
The Basic Module will remain largely unchanged from year to year and allows for trends analysis. Further, data from more than one year can be pooled to increase sample size for analytic purposes. The Basic Module contains three components: the Family Core, the Sample Adult Core, and the Child Core. Using these components, NHIS collects data on the family unit, and other, more detailed information from one randomly selected adult and child in the family.
The Periodic Modules collect more detailed information on some of the topics included in the Basic Module. These provide greater depth in certain areas while retaining key measures in all areas, providing rich data for multivariate analysis.
The Topical Modules respond to new public health data needs as they arise. These questions may be used to provide additional detail on a subject already covered in the Basic or Periodic Modules or on a different topic not covered in other parts of the NHIS.

Data are collected through a personal household interview conducted by interviewers employed and trained by the

U.S. Bureau of the Census according to procedures delineated by NCHS. Field representatives who conduct the interviews are trained to increase the accuracy, consistency, completeness, and timeliness of the data collection. The NHIS questionnaire is conducted using a computer assisted personal interviewer (CAPI), in which interviewers administer the questions using a laptop computer and enter responses directly into the computer during the interview, improving timeliness of data and provides resolution of certain kinds of inaccuracies.

Quality Assurance/Quality Control:

NHIS are reviewed and analyzed extensively to ensure its validity and reliability. The survey sample is designed to yield estimates that are representative and that have acceptably small variation. Prior to the actual survey, cognitive testing is performed by the NCHS Questionnaire Design Research laboratory, and pretests are conducted of the questionnaire and instruments in the field. Once collected, data are carefully edited, and they are checked by calculating various statistics and comparing them to estimates from earlier surveys and/or independent sources to test accuracy. Staff members calculate descriptive statistics and perform in-depth analyses, which results in feedback on the analytic usefulness of the data.
In the past, it has taken approximately 26 months for the survey data to be released for a given year. Improving the timeliness of NHIS is part of the GPRA performance measures. In 1999, the target was to reduce the time lag by 20%; data was released 20 months after collection, an improvement of 23%. Only data that meets confidentiality requirements and are expected to yield reliable estimates are released. Once the data is released, Staff provide documentation and seminars to instruct users on the appropriate use of the data. Use of appropriate software for the analysis of the complex survey data is encouraged.

Every 10 years, after the decennial Census is conducted, a newly-designed NHIS sample is drawn based on the Census data. This ensures consistency of NHIS data and the distributions of corresponding Census data, as well as adequacy of the NHIS sample sizes. In between sample redesigns, newly-constructed households are identified so that they can be eligible for inclusion in the NHIS sample.

National Hospital Discharge Survey Data:

The National Hospital Discharge Survey (NHDS), which has been conducted annually since 1965, is a national probability survey designed to meet the need for information on characteristics of inpatients discharged from non-Federal, short-stay hospitals in the United States. The NHDS collects data from a sample of approximately 300,000 inpatient records acquired from a national sample of about 500 hospitals. The survey is designed to examine important topics of interest in public health and for a variety of activities by governmental, scientific, academic, and commercial institutions.

Two data collection procedures are currently used in the survey. One is a manual system in which the hospital staff or staff of the U.S. Bureau of the Census abstract the data from medical records. The other is an automated system in which machine-readable medical record data is purchased from commercial organizations, stat data systems, hospitals, or hospital associations. Approximately 40 percent of the hospitals provide data through the automated system.

Timeliness is being addressed as part of the GPRA effort. Data are generally available approximately 17 months after collection. Use of information technology has improved the release of data through the Internet and other electronic means. In addition, through NCHS Health E-Stats, significant findings are released before the usual release of public use data.

Quality Assurance/Quality Control

The NHDS provides national and regional estimates of U.S. inpatient hospital utilization by the demographic characteristics of patients discharged, conditions diagnosed, and surgical and non-surgical procedures performed. Approximately 95 percent of the eligible sample hospitals respond to the survey.

To insure the accuracy of the collected data, an ongoing quality control program is in place for the NHDS. All data received are reviewed for legitimate codes and format. Manual data abstracted from medical records by NCHS or

Census staff are coded and keyed subject to an independent verification process. This process currently calls for 10 percent of the sample records to be recorded with discrepancies resolved by a chief coder. The overall error rate for records manually coded by NCHS is about 0.9 percent for medical coding and 0.2 percent for demographic coding.

Item non-response in the NHDS is low for most data elements, with the exception of the race and ethnicity items which have item non-response of 25 percent or more.

NHDS data are a good reflection of information found in the medical records. What is not known is the degree to which medical record information reflects actual performance.

National Immunization Survey:

The Childhood Immunization Initiative (CII) established a goal for 1996 of increasing vaccination levels for 2-year-old children to at least 90% for one dose of measles-mumps-rubella vaccine (MMR) and at least three doses each of diphtheria and tetanus toxoids and pertussis vaccine (DTP), oral polio virus vaccine, and *Haemophilus influenzae* type b vaccine (Hib).[1] In addition, CII established a goal for 1996 to increase vaccination levels for 2-year-old children to at least 70% for three or more doses of hepatitis B (Hep B) vaccine.[1] During the first quarter of 1994, national vaccination levels for children 19-35 months were 89.6% for measles containing vaccine, 25.5% for three or more doses of Hep B, 70.6% for three or more doses of Hib, 87.0% for three or more doses of DTP, and 76.0% for three or more doses of polio vaccine.[2]

The National Immunization Program continues to work throughout the 50 states, the District of Columbia and the U.S. Territories and Commonwealths in ongoing efforts to raise early childhood vaccination coverage levels. In order to provide current baseline estimates of vaccination levels for children 19 through 35 months of age and to monitor change in these levels, the National Immunization Survey (NIS) is being conducted in 78 of these Immunization Action Plan (IAP) areas, consisting of the 50 states, the District of Columbia and 27 metropolitan areas. Beginning with the second quarter of 1994 and continuing through the fourth quarter of 1997, the NIS data collection effort will conduct independent quarterly surveys in each of the 78 IAP areas. This will make it possible to combine four consecutive quarters of survey data with a degree of precision sufficient for analytic purposes to provide annualized estimates of the coverage rates for five antigens (DTP, Polio, MMR, Hib, and Hep B) within each of the 78 IAP areas. For 1994, the first year of data collection, the estimates will be based on data collected over three calendar quarters, since the initial data collection activities did not begin until April of 1994.

Methods

The NIS uses two phases of data collection. The first phase uses list-assisted random-digit-dialing (RDD) methods to sample households and conduct computer-assisted telephone interviews (CATI). Screening for households with children 19 through 35 months of age is conducted through brief interviews. When an eligible household is identified, data on five types of vaccinations, including dates and/or numbers of immunization events, are obtained for each child in the target age range living in the household. In the second phase, health-care providers of the eligible children found in the surveyed households are contacted and asked for immunization records for the children. Procedures for 1994 call for this provider record check when household respondents do not refer to household records or when the household data indicated children are not up-to-date on the combination of DTP (4 doses), polio virus (3 doses) MMR (1 dose) and Hib (3 doses). The 1994 provider data are collected retrospectively.

Use of a telephone-based sample design and data collection mode necessarily limits the target population to which inferences can be made to residents of households with telephones. Noncoverage bias in design is therefore a major concern. Although only approximately 7% of households in the U.S. do not have a telephone, the percentage of households with young children without telephones is significantly higher.[3] Other factors closely related to the vaccination status of children, such as family income, minority status and education of the mother, are also significantly correlated with telephone ownership. In addition, telephone coverage of the household population varies by geographic area. Detailed data from the 5% Public Use Microdata Sample (PUMS) files for the 1990 U.S. Census show that the proportion of households without a telephone ranges from a low of 1.2% for Santa Clara County (California) to 12.7% for New Mexico and Arizona.[4] The proportion of households that contain a two-year-old child but do not have a telephone is higher in every area of the country, ranging from 2.1% for Seattle/King County (Washington) to more than 25% for the state of Arizona. In general, households with a child two years of age are

more than twice as likely not to have a telephone than U.S. households as a whole.

Data Collection
The data collection is conducted using CATI from centralized telephone interviewing facilities. During data collection, interviewers call the sample of randomly generated telephone numbers selected for each IAP area. If a number is residential, an interviewer administers a screening interview to determine whether the household contains one or more children age 19 through 35 months. When an eligible household is identified, the adult who is most knowledgeable about the vaccination history of age-eligible children in the household is asked to report the number and/or dates of vaccination events, using vaccination records. Only about one household in twenty five (4%) contains a child in the designated age range. The CATI data collection employs computer software that presents the questionnaire on computer screens to each interviewer. The computer program guides the interviewer through the questionnaire, automatically routing the interviewer to appropriate questions based on answers to previous questions. Interviewers enter survey responses directly into the computer and the CATI program determines if the selected response is within an allowable range, checks it for consistency against other data collected during the interview, employs automatic skip patterns as appropriate, and saves the responses into a survey data file. On-line help facilities are available to aid interviewers in administering the CATI questionnaire.

As part of the design, the sample telephone numbers are matched against electronic telephone directories that contain address information for listed residential telephone numbers. Where a match is found and an address is available, an advance letter is mailed to the sample household. This letter is designed to increase respondent cooperation, both by identifying on the letterhead the sponsoring governmental agency to further legitimize the study, and by describing the reasons for conducting the NIS.

Procedures designed to encourage respondents to obtain and use vaccination records are central to the study design. Interviewers are trained to encourage respondents to retrieve and use any vaccination records they may have available for eligible sample children. If vaccination records are not readily available for an eligible child during the initial telephone contact, an appointment is made for a callback interview to the household.

Sample Design
The need to collect vaccination data independently for each of the 78 IAP areas on a quarterly basis, combined with the small proportion of households in the United States that contain a child 19 through 35 months of age, requires a large initial sample of telephone numbers. In order to screen efficiently the large number of households required to obtain a sample of age-eligible children during each quarter within each IAP area, NIS relies on RDD sampling, a well-known sampling technique for generating probability samples of telephone numbers. The specific RDD technique, list-assisted RDD, uses information on the distribution of telephone directory-listed residential telephone numbers to eliminate banks of telephone numbers that are very unlikely to contain any residential telephone numbers. This sampling technique ensures that a representative sample of both listed and unlisted telephone numbers are selected within each IAP area. At the same time, it yields a sample for which a high percentage of the sample telephone numbers are residential as opposed to being business or non-working numbers.

The desired level of precision of the four-quarter immunization estimates obtained from the data collection was set at a coefficient of variation of 5% for a survey percentage equal to 50%.[5] This means that 95% of the time, for a sample estimate of 50%, the interval of 45% to 55% will contain the average value of all possible sample estimates. The effective sample size for a *simple random sample* required to achieve this level of precision is 400 completed household interviews per four-quarter period. Additional specifications require that IAP area samples be distributed evenly across calendar quarters, resulting in an allocation of about 100 completed interviews per quarter, per IAP area. Employing the list-assisted RDD strategy, and the weighting methodology it requires, leads to small increases in sampling variance over a simple random sample. To account for this increase in sampling variance, the sample design targets 110 completed household interviews (instead of 100) per quarter in households with age-eligible children, in order to achieve the desired level of precision. Based on an initial estimated eligibility rate of 5%, an expected working number rate of 70% and target response rates of 90% for the screening interview and 85% for the immunization interview, an initial sample size of 4,108 telephone numbers is required, on average, in each IAP area per quarter. This sample size is needed to achieve 110 completed interviews in each IAP area per quarter with households containing at least one age-eligible child. The cumulative annual sample size of 440 (i.e., 110 x 4 quarters) completed immunization interviews per IAP area is designed to yield a coefficient of variation of .05 at the 95% confidence level for a survey proportion equal to .50.

This level of IAP area precision requires a total sample size across all 78 IAP areas of 25,740 eligible household interviews in the 3 calendar quarters of 1994. The number of sample children in the eligible age range will be slightly higher than these figures because a small percent of households contain two or more age-eligible children. This initial sample size of telephone numbers implies a total sample size of 320,424 telephone numbers per quarter across all 78 IAP areas. For the survey year 1994, containing three quarters, the total sample size was 1,177,140 randomly generated telephone numbers (see description of data collection outcomes below).[6]

Schedule
The schedule for designing, developing, and implementing the sample design, data collection and post-survey processing procedures for the 1994 NIS began on January 9, 1994. The survey and CATI system development was completed between January 9 and April 3, 1994. This included the development and testing of the survey instrument, design and programming of the CATI system, development of the final plans for the NIS sample, and designing the system of post-survey statistical weights.

While the data collection for Q2/94 began as scheduled, interviewing was not completed for Q2/94 until September 3, 1994. Interviewing for Q3/94 began the first week of July, 1994 and the final close of Q3/94 interviewing occurred as scheduled on October 16, 1994. Interviewing for the Q4/94 sample began on October 18, 1994 and proceeded until January 15, 1995. In order to complete interviewing for the first year, three additional telephone interviewing centers were brought on-line during Q3/94 interviewing. The CATI system was implemented on the computer systems at these sites and the standard interviewer training was conducted for the staff of these telephone interviewing centers. These alternative data collection sites processed sample for either whole replicates (independent, randomly selected subsamples) and/or in some cases random half- replicates.

Data collection for the 1994 Provider Record Check Study began in January 1995 (Q1/95) and was completed in March 1995.

Questionnaire Changes
Questionnaire development and enhancement was an ongoing process throughout 1994. Several CATI system enhancements were added. While the main screening questionnaire was used for Q2, Q3, and part of Q4, it was modified during Q4 in an attempt to improve the observed eligibility rate and to reduce the number of calls required to complete screening and interviewing.

Data Collection Outcomes
Table A shows the basic sample information by quarter for calendar year 1994. The total sample of telephone numbers for Q2/94, Q3/94, and Q4/94 combined was 1,177,140 telephone numbers, not including telephone numbers screened out by the sample pre-screening process.[7] The sample design specified that 3% of numbers would be unresolved. For Q2/94, Q3/94, and Q4/94, 6.7% of sample telephone numbers were unresolved at the end of the interviewing period (Table A).[8] The unresolved number rate varied from a high of 9.6% in Q2/94 to a low of 2.6% in Q4/94. This improvement is attributable to the calling of telephone company business offices in Q4/94 and to increased calling within IAP areas with low household working number rates. Among resolved telephone numbers, 60.9% reached a residence, 13.8% were non-residential (primarily businesses), and 25.3% were non-working numbers.

Table A. NIS 1994 Basic Sample Frame Summary by Quarter

	Q2		Q3		Q4		All Quarters	
Final Case Status	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
All Sample Telephone Numbers	334,235	100.0	443,184	100.0	399,721	100.0	1,177,140	100.0
Unresolved Telephone Numbers	31,949	9.6	36,301	8.2	10,270	2.6	78,520	6.7
Resolved Telephone Numbers	302,286	90.4	406,883	91.8	389,451	97.4	1,098,620	93.3
Status of Resolved Telephone Numbers								
Non-working number	302,286	90.4	406,883	91.8	389,451	97.4	1,098,620	93.3
Working Number: Non-residential	39,620	13	55,531	14	56,200	14	151,351	14
Working Number: Residential	184,295	61	246,322	60	238,355	62	668,972	61

The initial design specifications for data collection called for a screening completion rate of 90% of households contacted and for an interview completion rate of 85% of the households with sample children. The NIS screening completion rate over the three quarters of 1994 was 96.2% and the interview completion rate among known eligible households was 95.4%.

The observed NIS household eligibility rate of 4.2% in 1994 was much lower than the 5% estimate based on 1990 Census data. This outcome suggested a concern about both the screening completion rate and the overall response rate (the product of the screening and interview completion rates). If the actual number of eligible households was higher than the number determined in the NIS, both rates would appear high. To address this concern, adjusted rates were calculated for both the screening response rate and the overall response rate. Using an estimated number of eligible households (based on the Census figure) as an adjustment factor, the adjusted screening response rate for 1994 was 72.9% and the adjusted overall response rate was 69.5%.

National Vital Statistics System:

The National Vital Statistics System produces the Nation's official vital statistics. Data on teen births, access to prenatal care, maternal risk factors, infant mortality, causes of death, and life expectancy are examples of the staples of public health provided by vital statistics. Vital statistics are often the most complete and continuous information available to public health officials at the national, state, and local levels; the timely availability of these data is critically important. The registration of vital events, (births, deaths, marriages, divorces, and fetal deaths), is a state function. Since 1902, the Federal Government has obtained use of the records for statistical purposes through cooperative arrangements with the responsible agency in each state.

Standard forms and model procedures for the uniform registration of the events are developed and recommended for state use through cooperative activities of the states and the National Center for Health Statistics (NCHS). NCHS also provides training and instructional materials to the states as part of ongoing technical assistance.

The purpose of collecting the data is to monitor trends over time through vital life events. Vital records and reports originate with private citizens, such as the family affected by the events, physicians, or funeral directors. The following are procedures used for the collection of birth and death data:
Birth Data- By law, birth registration is the direct responsibility of the hospital of birth or the attendant at the birth (generally a physician or midwife). In the absence of an attendant, the parents of the child are responsible for registering the birth. While procedures vary from hospital to hospital, usually the personal information is obtained from the mother; medical information may be obtained from the chart or from a worksheet filled out by the birth attendant. Reporting requirements vary from state to state; in general, the completed certificate must be filed with the state or local registrar within 10 days of birth. Published data include all counties and places of 10,000 or more population. Electronic files include data for states, counties, large cities (population of 100,000 or more), and metropolitan statistical areas.

Death Data- By law, death registration is the direct responsibility of the funeral director or person acting as such. The funeral director obtains the data required, other than the cause of death, from the decedent's family or other informant. The attending physician provides their best medical opinion about the cause and manner of death; later this information is coded by the state or CDC/NCHS according to uniform codes. Demographic information is also recorded. If no physician was in attendance or if the death was due to other than natural causes, the medical examiner or coroner will investigate the death and provide the cause and manner. Reporting requirements for death also vary, but in general the completed certificate must be filed within 3 to 5 days of the death. Published data include all counties and places of 10,000 or more population. Electronic files include data for states, counties, large cities (population of 100,000 or more), and metropolitan statistical areas.

Fetal deaths are also reported through the National Vital Statistics System. All fetal deaths of 20 weeks or more gestation that occur in the United States are recorded. Further, a linked birth/infant death file allows for the analysis of demographic and health characteristics from certificates of live births in combination with causes of death and other data from death certificates of infants who died before their first year of life. The linked file set includes information on all the infants who died in the United States each year, as well as information on all live births. An additional file includes information on death records not linked to birth certificates. The match rate is about 97-98 percent. Data are organized by calendar year rather than birth cohort to expedite data release.

Provisional and final estimates of the number of marriages and divorces are obtained from each state able to provide these figures. Since data are not available from all states, national divorce rates are not produced. Currently 46 states and DC provide divorce counts. Detailed characteristics of marriages and divorces have not been available since 1996.

Other programs that are related to the National Vital Statistics System, such as the National Maternal and Infant Health Survey, the National Survey of Family Growth, and the National Death Index.

Quality Assurance/Quality Control

The data collected through the National Vital Statistics System represent all registered vital events in the United States and adequately represent the true rates of events. In order to more accurately record birth and death information, new birth and death certificates are being designed. These new forms have been designed through a collaborative effort with states, researchers and other interested parties. The revised certificates reflect changing data needs and emerging public health applications. The revised certificates and related data sets will be implemented in 2003.

Data are collected using uniform procedures and are accurate and consistent. The data are reported as soon as they are analyzed by CDC/NCHS staff.

Monthly provisional numbers and rates of births, deaths, marriages, and divorces are published in the *National Vital Statistics Reports.* These figures are based on approximate counts of the number of events that occurred in a given state. An estimation procedure is used to convert these occurrence estimates into state-specific estimates of the number and rate of resident events.

Preliminary data collected through the National Vital Statistics System are made available to the public approximately

10 months after the end of the collection year. Birth and death statistics are based on substantial samples of birth and death records weighted to the counts of records received in state vital registration offices, which are the same counts shown in the provisional statistics. Data are presented for a 12-month period and are published semi-annually in the *National Vital Statistics Reports*.

Final data are released about 18 months after the collection through publication in the *National Vital Statistics Reports*, public use data tapes, CD-ROM, Series Reports, the Internet, and journal articles. Special reports are also published based on this data set. Use of electronic products have greatly increased the accessibility of our data and reduced the costs to researchers and data users.

It is the goal of the agency to reduce the lag for this data system. The 1997 final mortality data was released in 18 months, representing a 30% reduction in time from 1993. The 1997 final birth data was released in 16 months, a reduction of 11% from 1994. For both data sets, the actual performance exceeded the target, 5%. The agency intends to continue to strive for improving the release time.

Sentinel Surveillance for Chronic Hepatitis C:

Chronic liver disease is the tenth leading cause of death among adults in the United States, and accounts for approximately 25,000 deaths annually. An estimated 8-10,000 of the these deaths occur among persons chronically infected with hepatitis C virus and HCV-associated end stage liver disease is the most frequent indication for liver transplantation among adults.

Although it is clear that a large number of persons in the United States are chronically infected with HCV and that many will develop chronic liver disease, the burden of disease has not been well characterized. There is no ongoing surveillance, and few population-based studies have been conducted from which to determine the incidence and prevalence of chronic liver disease and the relative proportion of cases attributable to viral hepatitis and other etiologies.

To begin to collect this information, a pilot chronic liver disease surveillance system was established by CDC in one site in 1998. In 1999, the pilot project was expanded to two sites, with a third identified and expected to begin enrolling patients in 2000. All patients with newly-diagnosed chronic liver disease are identified in a defined geographic area. Patients meeting a standard case definition involving specific radiologic, pathologic, or laboratory criteria are invited to participate.

Data are collected through the surveillance system in three parts:

1) A standard questionnaire, developed by CDC, is used by all sites in interviewing patients, so that data can be compared across sites and aggregated as appropriate. The questionnaire includes questions taken from other established surveillance systems and from previous studies of chronic liver disease. It gathers information on demographic characteristics, clinical information such as hospitalizations and other medical conditions, quality of life, and exposures and risk factors, such as alcohol consumption or use of prescription and non-prescription medications, that may cause chronic liver disease or affect its clinical course.

2) A standard form is used to abstract clinical and laboratory information from the patient's clinical chart. This information, collected consistently across sites, includes data needed to determine underlying etiology of disease, treatment history, medication use, and other relevant clinical information not readily available from the patient.

3) A serum sample is collected and sent to CDC for determination of the presence of serologic markers for viral hepatitis.

An important characteristic of this pilot project is its comprehensiveness. This is the first time that all patients with chronic liver disease in several defined geographic areas are being identified using a common methodology, and where consistent information is being collected in all sites. It is hoped that, ultimately, the methodology and data collection instruments can be used in multiple sites throughout the United States to develop a comprehensive picture of the occurrence and characteristics of chronic liver disease, and to monitor trends over time.

Quality Assurance/Quality Control: As a new pilot project, quality assurance and quality control instruments are still under development. Nonetheless, several kinds of validation studies have already been conducted. To assess the completeness of reporting, two supplementary studies have been conducted: a survey of primary care practitioners and a review of all first-time liver biopsies. These studies indicated that overall surveillance was quite comprehensive, and was successful in identifying the vast majority of patients in the target population. To validate the accuracy of chart abstraction, a review of a randomly-selected subset of charts was conducted, and failed to reveal any significant errors. To assess the overall validity of the study, early preliminary results have been compared to the few existing relevant data. This evaluation, demonstrating that the incidence of newly-diagnosed chronic liver disease has increased in recent years, is already contributing to CDC's efforts to more accurately estimate the burden of illness from chronic liver disease.

U.S. Sentinel Physician Surveillance for Influenza:

The national sentinel physician surveillance system for influenza was established in 1982. National influenza surveillance data is the cornerstone for U.S. Public Health efforts to control and prevent influenza. The information is used to make public health recommendations during influenza season, make recommendations to FDA and WHO regarding vaccine strain selection, monitor annual influenza activity and examine long-term trends in influenza epidemiology, and rapidly detect unusual influenza strains including those with pandemic potential. Active US influenza surveillance is conducted from October through May of each year. Influenza-like illness (ILI) is reported weekly by physicians recruited as sentinel sites. The information in the national database is updated daily for use by State Health Departments and summarized weekly for public dissemination.

In 1996, a collaborative process was started with the Council of State and Territorial Epidemiologists (CSTE) and representatives of the Association of Public Health Laboratories (APHL) to enhance U.S. influenza surveillance. The overall goal was to improve national influenza surveillance to provide better information during annual influenza epidemics and adequate warning and monitoring of the next pandemic. Continuous improvements have been implemented over the last several years.

During the 1997-98 influenza season, 27 states and the District of Columbia elected to participate in a pilot program to upgrade the sentinel physician surveillance system. The pilot program merged CDC's national sentinel surveillance system and the state-based systems into one integrated system, which is based on common methodologies and standards. During the 1998-99 influenza season, the enhanced sentinel physician surveillance system was expanded to include 40 states and the District of Columbia and an Internet reporting system was developed which allows sentinel physicians to enter weekly morbidity data via the Internet. During the current year, modifications to improve the automated system that displays sentinel physician data on the Internet were implemented. An automated system to create and display summary WHO virologic data was also begun and is in progress. All system components have been recently upgraded and modules have been modified to satisfy user requirements for logging and reporting specimens.

States are responsible for establishing, recruiting, and maintaining a state-based sentinel physician group. The states are also responsible for ensuring that data are collected and transmitted regularly to a central data repository at CDC, which is updated daily. The information (raw data) is accessible through the Internet to state coordinators in participating states. Analyses of the data are available to state coordinators before the general public. CDC is responsible for coordinating the system nationally, maintaining the reporting systems, processing and analyzing the data, and maintaining the Internet site. Efforts to improve the system are continuous.

In FY 1999, approximately 880 physicians from 48 states and the District of Columbia are enrolled in the sentinel physician system, but only about 300 of these report data regularly in any given week. Physicians report the number of patient visits per week and the number of those patients seen for ILI by age group. Sentinel physicians can report data by three methods: 1) Internet reporting; 2) touch tone phone reporting; and facsimile transmission of data with manual entry of data. A program developed by CDC integrates the three sources of data and uploads the data to the Internet site. Data is available daily to each State Coordinator. A summary of influenza activity is available to the general public each week. The percentage of sentinel physicians using the Internet to report weekly data increased from 8 to 17 percent in the last year.

Quality Assurance and Quality Control Information:

The process of improving the US Sentinel Physician Surveillance program to make it user friendly, to offer clear case definitions, and to allow multiple options for input and access, has been continuous. With daily updates and weekly summaries the information is extremely timely and pertinent for decision making. Epidemiologists in the Influenza Branch routinely analyze the data for outlying information and perform routine checks to ascertain that the data is coherent. State coordinators routinely check to see if physicians are reporting in a timely manner and troubleshoot problems in each state. Guidelines are provided to sentinel physicians for optimal timing of specimen collection for virologic testing on certain patients. While these results will not be useful to the physician for confirming individual cases of influenza, these specimens will provide information on whether influenza has entered the local community. There is no way to ascertain that the data on influenza like illness is free of error, but as the number of participating sentinel physicians increases, the potential consequences of error decreases. Given that sentinel surveillance provides an index of current influenza activity, consistent reporting by a stable group of physicians is imperative for data reliability. Increasing sentinel physician sites and sentinel physician participation in each state would greatly increase the validity of the data.

Limitations:

The Influenza Branch has proposed to increase US sentinel sites to approximately 680 sites that routinely report for the year 2001. Large increases in the number of reporting physicians and retention of physicians from year to year, would allow for comparison between years, minimize the impact of incorrect data and give an even better indication of US influenza activity. Currently, the database is not geographically representative. Again, increasing the number of reporting sentinel physicians and targeting certain areas could solve this problem. Retention would be enhanced if sentinel physicians and state coordinators derived greater benefit from participation.

Youth Risk Behavior Surveillance System:

In 1990, the Youth Risk Behavior Surveillance System (YRBSS) was established by CDC. One of the components of the YRBSS is a national school-based survey that was first conducted in 1990 and has been repeated biennially since 1991. The national Youth Risk Behavior Survey (YRBS) measures six categories of priority health risk behaviors that contribute to the leading causes of mortality and morbidity among youth and adults in the United States: behaviors that contribute to unintentional and intentional injuries; tobacco use; alcohol and other drug use; sexual behaviors that contribute to HIV infection, other sexually transmitted diseases and unintended pregnancy; dietary behaviors; and physical activity.

The YRBS questionnaires contained 89 multiple-choice questions in 1999 and is designed for self-administration using a computer-scannable questionnaire booklet. The YRBS questionnaire has been modified several times since 1990 to address emerging public health problems in a timely manner.

The national YRBS is administered during the spring semester to nationally representative samples of students in grades 9-12 attending both public and private schools. Professional data collectors, trained specifically for the YRBS, are used as field staff to ensure standard survey administration procedures. The national YRBS uses a three-stage cluster sample to select schools and classes of students within schools. African American and Hispanic students are over sampled to provide accurate estimates for these subgroups of students from each survey cycle. By combining data from multiple survey cycles it is also possible to obtain accurate estimates for Asian and Native American youth. The sample size totals approximately 12,000 students each survey. The school response rate averages 76%. The student response rate averages 88%.

Quality Assurance/Quality Control:
A reliability study of the YRBS questionnaire conducted in 1993 demonstrated that students reported health risk behaviors reliably over time. Psychometric work on the YRBS questionnaire also has demonstrated that it produces accurate and high quality data. Standardized data editing and cleaning procedures further improve data accuracy and consistency. Data are released within 12 months from the completion of data collection and are made available to the public via the Internet (www.cdc.gov/nccdphp/dash/yrbs). A new psychometric study of the YRBS questionnaire is planned for the spring of 2000. Results will be available in the summer of 2001.

Appendix A.3

Key Improvements in the CDC FY 2002 Performance Plan

The CDC FY 2002 Performance Plan includes key improvements over the FY 2001 Performance Plan. The FY 2002 Performance Plan has been revised extensively by CDC program staff to more effectively communicate and link CDC strategies for achieving the performance to specific goals, performance measures and targets, and to revise performance targets and strategies based on FY 1999 performance results and FY 2002 estimated budget. Examples of CDC programs with extensive revisions include CDC's Infectious Disease Program, HIV/AIDS, Epidemic Services, and the Bioterrorism Program.

In recent weeks, CDC has proposed a revised budget structure. Categories describing major budget activities have changed slightly. CDC's Justifications of Budget Estimates is being submitted following this revised format. CDC's Annual Performance Plan and Report, which has traditionally mirrored its budget structure, deviates from the revised budget structure in a few instances. The next submission of CDC's Annual Performance Plan and Report will follow the revised budget categories, but due to the short period of time between final acceptance of the revised budget structure and submission of the plan, changes were not possible for this submission. In all instances, program descriptions, performance goals and performance measures are provided for major budget categories. There is some minor deviation in terms used for the sub-budget activities. Nevertheless, budget data is provided for all major budget categories, and this budget data is linked to performance data. The minor discrepancies in descriptions of sub-budget activities will be rectified in the submission of the 2003 Annual Performance Plan.

The CDC Prevention Research Program is undergoing transition. Initially, the Prevention Research Program goals and objectives focused on strengthening the infrastructure (funding, peer review and award mechanisms) to support new CDC research and development R & D) activities. Now CDC has begun to balance CDC's research portfolio to stimulate innovative intervention methodology, increase communication and adoption of these interventions, and to evaluate the interventions' effectiveness in decreasing health disparities and preventing disease and disabilities.

CDC's performance plans are dynamic, reflecting the changes in funding and program priorities, achievement of targets, and initiation of new programs. In addition, for the FY 2002 Performance Plan, CDC has integrated management controls that prompt programs to establish performance goals, targets and data sources to track performance as new initiatives are developed and funded. With this new management control system, CDC is trying to achieve a closer linkage with the budget process and budget documents. As this process evolves, CDC anticipates there will be greater variations in the number of performance measures and targets year to year as well as an increase in process measures, which predominate in new programs where data systems have not been in place long enough to measure program outcomes.

Minor formatting and reporting changes were integrated in this document to enhance the reader's ability to recognize the performance reporting section entitled, Performance Summary. In addition, several programs with multiple and complex goals such as HIV/AIDS and Occupational Health, have begun to link the performance summaries to each goal instead of reporting overall results by program. These changes should enhance the reader's ability to better link performance targets to the program goals. The Emerging Infections Program estimated the overall target for several performance measures within the tables to provide a perspective of the overall desired level of performance for each performance measure. Other programs such as the Tuberculosis Program provided information on the ultimate desired level of performance within the performance summary sections.

Overall, CDC's program managers have successfully addressed most of the data quality concerns expressed by the Government Accounting Office and Congress. The challenge to succinctly describe and measure results for complex, multifaceted public health programs continue to be a challenge for CDC. However, substantial strides have been made to more clearly communicate the challenges and successes of its major public health programs.

Appendix A.4

Performance Measurement Linkages with Budget, Cost Accounting, Information Technology Planning, Capital Planning and Program Evaluation

Clinger-Cohen Act

CDC is currently implementing the requirements under the Clinger-Cohen Act of 1996 (CCA) for information technology (IT) capital investment planning, monitoring, and performance measurement. The Information Technology Investment Review Board (ITIRB) process has been established and was released CDC wide on January 5, 1999 via the CDC Intranet. CCA compliance became a component of the CDC budget planning process for the FY 2001 budget. Major IT investments associated with budget initiatives required responding to the "Raines Rules" as part of the submission.

Also in compliance with CCA, CDC has developed several components of the agency's information technology architecture, such as certain health data standards, networking and telecommunications architecture, information security, and the majority of the agency's administrative procedures. More extensive work on other core business processes, information flows, process and data models is ongoing.

In addition to efforts in the implementation of CCA, CDC has a well integrated GPRA and IRM Strategic Plan that aligns IT products and services with CDC's ever-changing mission needs and directions. The IRM strategic goals, strategies and performance measures support the mission, mission goals, and CDC's GPRA performance plan.

Appendix A.5

Government Performance and Results Act:
FY 2002 Change Chart for Goals and Performance Measures

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
Emerging Infections	Develop and strengthen epidemiologic and laboratory methods for detecting, controlling, and preventing infectious diseases.	Regional population-based Emerging Infections Programs, will conduct early warning investigations of agents of infectious diseases.	**Revised measure to more effectively relate it to site activities.** The Emerging Infections Program (EIP), a network of regional population-based programs, will be established to conduct active surveillance, engage in applied epidemiologic and laboratory research and pilot and evaluate prevention and intervention measures.
Emerging Infections	Reduce the spread of antimicrobial resistance.		**New goal:** Established new goal to better categorize multiple performance measures within Emerging Infections.
Emerging Infections	Reduce the spread of antimicrobial resistance.	Reduce the number of courses of antibiotics for ear infections for children under age of 5 years.	**New performance measure**.
Emerging Infections	Reduce the spread of antimicrobial resistance.	Reduce the number of courses of antibiotics prescribed for the sole diagnosis of the common cold.	**New performance measure**.
Emerging Infections	Reduce the national incidence of health care-acquired infections attributable to medical errors by 50% within 5 years.	Establish base rate of incidence of healthcare-acquired infections attributable to medical errors.	**New goal and measure for FY 2002.**

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
HIV/AIDS	Improve the ability of the Nation's HIV/AIDS surveillance system to identify incidence and prevalence of HIV infection.	Number of states that will monitor trends in HIV incidence with CDC's technical assistance.	**Revised performance measure:** Revised for clarity and specificity. Expand the number of states that are able to measure: 1. Access to care; 2. Adherence to care; and 3. Impact of antiretroviral therapy (ART) on long term survival.
HIV/AIDS	Reduce the percentage of HIV/AIDS-related risk behaviors among school-aged youth through dissemination of HIV prevention education programs.	Reduce the percentage of high school students who have ever engaged in sexual intercourse. Reduce the percentage of currently sexually active high school students who engage in sexual intercourse without a condom.	**Revised measures:** Increase the proportion of adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active. Increase the proportion of Black or African American adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active. Increase the proportion of Hispanic or Latino adolescents (grades 9-12) who abstain from sexual intercourse or use condoms if currently sexually active. **Explanation:** During summer and fall 1999,CDC worked very closely with the Office of Disease Prevention and Health Promotion (ODPHP), the Office of the Surgeon General (OSG), CDC's NCHSTP, and others to develop a single composite measure of abstinence and condom use. The result of this collaborative effort yielded *Healthy People 2010* objective 25-11: "Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if sexually active." This measure will serve as a Leading Health Indicator and a national health objective for the next ten years and utilizes
Continued...	Continued...	Continued...	Continued...

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
...continued. HIV/AIDS	...continued. Reduce the percentage of HIV/AIDS-related risk behaviors among school-aged youth through dissemination of HIV prevention education programs.	...continued. Reduce the percentage of HIV/AIDS-related risk behaviors among school-aged youth through dissemination of HIV prevention education programs.	..continued. data from CDC's national Youth Risk Behavior Survey. Eliminating health disparities is consistent with one of the two goals of *Healthy People 2010*, and with agency priorities at CDC. The new GPRA measures point to the disparities among Black/African American and Hispanic/Latino adolescents with regard to abstinence and condom use.
Immunization	Improve vaccine safety surveillance.	Use new data mining techniques to increase the number of detected true and false signals of adverse events associated with vaccination. Expand the Vaccine Safety Datalink (VSD) sites to increase the number of persons under active surveillance for vaccine safety. Improve the ability of health care providers to report vaccine adverse events, including those associated with influenza vaccine, by pilot testing electronic reporting to VAERS in managed care organizations.	**New goal and measures.**
Health Statistics	Make data more readily accessible to decision makers and researchers.	(a) Increase the number of articles published in peer-review journals (*Journal of the American Medical Association, New England Journal of Medicine*, etc.) (b) Increase number of articles by NCHS researchers by 10% over 5 years. Increase the number of new users to the NCHS Internet site.	**New measures**.

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
Health Statistics	Improve racial and ethnic data for programmatic and policy decisions.	Increase the number of subgroups with available data in the Healthy People 2010 template.	**New goal and measure.**
Health Statistics	Increase capacity for state and local data.	Fund states to implement electronic birth and death certificates.	**New goal and measure.**
Injury Prevention and Control.	Provide online access to injury prevention data.	Develop a user-friendly, personal computer-based system for accessing Federal injury data in a variety of national- and state-based systems.	**New goal and measure.**
Injury Prevention and Control.	Improve uniformity, quality, and accessibility of emergency department data for public health surveillance in several state, ultimately developing the capacity to improve data in all states through development of guidelines, recommendations, or technical assistance.	Establish the capability of state health departments to receive secure transmission of non-identifiable patient data from participating emergency departments.	**New goal and measure.**

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
Public Health Improvement	Public Health practitioner at the nation's front lines–local, state, and federal–are prepared to effectively respond to current and emerging public health threats.	The proportion of public health practitioners targeted by the Center for Public Health Practice and CDC CU that demonstrate competencies and level of preparedness required to respond to current/emerging public health threats. The proportion of the public health workforce that complete certified training delivered via the integrated life-long learning system and CDC CU. The number of public health interventions influenced by findings from applied research in workforce preparedness.	New goal and measures.
Environmental Health.	Increase the number of disorders covered in the Newborn Screening Quality Assurance Program.	Disorders covered by the Newborn Screening Quality Assurance Program.	**New goal and measure**.
Environmental Health.	There will be virtually no children with blood lead levels that exceed 10 micrograms per deciliter, which is the level at which children's health may be damaged.		**Revised Goal:** Reduce the number of children with blood lead levels that exceed 10 micrograms per deciliter, which is the level at which children's health may be damaged.
Environmental Health.	By 2002, at least half of all states and territories will have implemented a genetics and disease prevention program, focusing on the integration of genetic testing into targeted preventable disease programs (such as asthma, cancer, cardiovascular disease and arthritis) and related communication programs.	The number of state-based genetics programs will be increased.	**Deleted goal and measure:** Program priorities shifted towards genetic testing assessments.

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
Environmental Health.	Clinical and public health validity and utility data for specific DNA-based tests will be made available to public health professionals and the public.	The number of DNA-based tests assessed using a core set of data required to define clinical and public health utility.	**New goal and measure.**
Environmental Health.	State health departments will integrate genetic testing into their targeted preventable disease programs (such as asthma, cancer, cardiovascular disease, and arthritis) and related communication programs).	Number of states receiving technical assistance from CDC in the integration of genetics into public health.	**New goal and measure.**
Environmental Health.	Increase understanding of the relationship between environmental and health effects.	Number of environmental health studies completed.	**New goal and measure.**
Occupational Health.	Ensure safe and healthful working conditions by developing a system of surveillance for major occupational illnesses, injuries, exposures, and health hazards.	Implement NIOSH Surveillance Strategic Plan and seek opportunities for enhancement through stakeholder interaction, NORA teams, and collaboration with states.	**New measure.**
Occupational Health.	Promote safe and healthful working conditions by increasing occupational disease and injury prevention activities through workplace evaluations, interventions, and NIOSH recommendations.	Respond to requests for workplace evaluations and assistance from employers, workers, and others, and provide practical advice to address problems. Provide scientific support for public health policy development testimony, and non-regulatory initiatives.	**New measures.**

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
Occupational Health.	Foster safe and healthful working conditions by providing workers, employers, the public, and the occupational safety and health community with information, training and capacity to prevent occupational diseases and injuries.	Transfer of scientific and technical information to employers, workers, the public and the occupational safety and health community. Conduct, arrange, and sponsor technology transfer and training sessions. Support capacity building activities.	**New measures.**
Buildings and Facilities.	Implement the scheduled improvements, construction, security, and maintenance as specified under the FY 2000 schedule of the Clifton Road and Chamblee Master Plans.	Begin design of Scientific Communications Center to replace existing Building 2, and vacate and modernize existing Building 3, Clifton Road Campus. Begin design of New Headquarters Building 21, Roybal Campus, for Lease Consolidation Project. Begin design of Building 106, Chamblee Campus, for Lease Consolidation Project.	**New measures.**

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
Bioterrorism	Increase the ability of CDC, state, and local health departments to respond to terrorist threats.	Public health laboratories will be inspected in accordance with the Select Agent Rule. The number of laboratories qualified to provide surge capacity for analysis of chemical agents. Increase the capacity of state and major city laboratories to provide or access rapid testing of potential bioterrorism agents. The number of laboratories participating in the National Laboratory Response Network to provide rapid and/or reference support. Support local health departments to develop advanced information technology for bioterrorism preparedness and response. The number of communities demonstrating advanced applications of information technology and training for preparedness and response t chemical and biological terrorism.	**New and revised measures**.
Technology Transfer	Review and manage CDC patent portfolio to maximize return for public health benefit.	Less than 30 percent of unlicenced patents are being maintained by CDC beyond 4 years from the date of issue.	**Deleted Measure:** Upon further analysis, this is not a valid measure of technology transfer. It is an arbitrary measure that may not reflect the public policy needs of the agency to invest in solutions to anticipated problems or the "ahead of their time" nature of CDC inventions.

Program Activity	Goal	FY 2001 Original Performance Measure	Revision and Explanation
Technology Transfer	Promote Private sector participation and investment in applications of novel research discoveries.	Increase the number of EIRs arising from cooperative research with the private sector.	Deleted measure: Creation of new inventions is a likely result of cooperative research under CRADA, but it is not the primary benefit or driving force that makes the CRADA collaboration worthwhile from a public investment and economic enhancement standpoint, and therefore is not a valid measure of technology transfer.
Program Support	Information systems operate reliably and continuously.	Ensure critical information systems and IT infrastructure (CDC Data Center, wide area network, e-mail, and Internet/web services) operate reliably and continuously.	New FY 01 and FY 02 performance goal and measure.
Program Support	Provide a variety of standardized and integrated means for health practitioner and public access to CDC information resources.	Continually enhance CDC's Internet infrastructure and valued information content so that access to CDC information resources grow 25% per year. And Continue enhancing the CDC Voice/FAX Information Service (VIS) such that usage grows 10% per year.	New Performance Measure: Continually enhance CDC's Information Technology infrastructure so that the public access to CDC information resources using both the Internet infrastructure and the CDC Voice/FAX Information Service grows 25% per year. The measures were combined to reflect the relationship of the two goals as being mutually supportive to the same growth in the desired outcome.